**ZAMZAM FOUNDATION**

# PROGRAMME PLANNING, MONITORING & EVALUATION POLICY MANUAL

DRAFT

**(2019)**

## ABBREVIATIONS

| | |
|---|---|
| **BCM** | Beneficiary Contact Monitoring |
| **ITT** | Indicator Tracking Table |
| **M&E** | Monitoring and Evaluation |
| **NGOs** | Non-Governmental Organizations |
| **OECD/DAC** | Organisation for Economic Cooperation and Development/Development Assistance Committee |
| **RBM** | Results-Based Management |
| **SMART** | Specific, Measurable, Achievable, Realistic, and Timely |
| **SWOT** | Strengths, Weaknesses, Opportunities and Threats |
| **VCA** | Vulnerability Capacity Assessment |
| **ZZF** | Zamzam Foundation |

# TABLE OF CONTENT

# 1.0 INTRODUCTION

This document sets out Zamzam Foundation's (ZZF) Planning, Monitoring and Evaluation Policy for the implementation of its projects in all contexts, intervention zones and sectors. The aim of this guidance manual is to introduce the user to project/programme planning, monitoring and evaluation for Zamzam Foundation. It describes the different stages of the planning phase of the "project/programme cycle" within the context of Results-Based Management (RBM) and also gives an overview of the various components of RBM and explains how to integrate and apply this approach in practice. In addition, the manual summarizes briefly the other key phases of the cycle, which involves, assessment, implementation and monitoring and evaluation.

The manual has been developed primarily for use by people managing projects and programmes and is mainly designed for use at the country level, the basic principles can be applied to project and programme planning as well as monitoring and evaluation at any level. The manual draws on international project planning process and practices to suit the particular needs and uses of project/programme management within the organization. This manual shall serve as a guide, which should be applied with common sense according to the particularities of the context concerned. The manual will be revised periodically to take account of learning gained from use in the field.

# 2.0 PART A: PROGRAMME PLANNING

## 2.1 Key concepts and definitions

**Planning** can be defined as the process of setting goals, developing strategies, outlining the implementation arrangements and allocating resources to achieve those goals. Planning is regarded as the starting point, and is therefore a crucial stage and forms the basis, both of the project (project framework) and its monitoring and evaluation system (monitoring plan).

**Monitoring** can be defined as a continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds.

**Evaluation** is the systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results, including the sharing of results and the implementation of corrective measures. The aim is to determine the relevance and achievement of the objectives with regard to predefined criteria. An evaluation process should provide credible and useful information that allows the lessons learned to be integrated into future decision-making and programming processes.

**A project** can be defined as a series of activities aimed at bringing about clearly specified objectives within a defined time-period and with a defined budget. Here, a distinction should be made between 'project' and 'funding contract'.

**A programme** is defined as a group of related projects managed in a coordinated way to obtain benefits not available from managing the projects individually. A programme may also include elements of on-going, operational work and hence is comprised of multiple projects created to obtain broad organizational or technical objectives.

**Activity** is a combination of several tasks, all of which target the same objective. Activities are the lowest level of actions that need to be planned. Tasks are the simplest actions that make up activities.

## 2.2 Fundamental principles

Three principles constitute the basis of ZZF's Project Planning, Monitoring and Evaluation Policy, i.e. Quality, Learning, and Accountability.

**Quality:** To achieve its social aims and mission, and to make the organization and its programmes more efficient in the service of its beneficiaries, Zamzam Foundation constantly strives to improve quality. In line with the approaches adopted at international level, ZZF defines quality as "the capacity to pursue the purpose and mission, achieve the objectives of the association and serve the beneficiaries and satisfy the expectations of stakeholders at the right cost" and in a manner adapted to meet the needs, demands and context of an intervention. This approach is multi-dimensional: governance, administration, human resources, communications and fund-raising, financial management, management structure, programmes, and performance (of projects run for beneficiaries). It also involves steering systems, guidelines, processes and practices.

The Policy divides this concept into three constituent parts: The *quality of processes* (Implementation, support, steering systems and measurement), which helps to implement the various constituent activities of a project in a fluid and cohesive manner; *Technical quality,* which mainly concerns a project's products and/or services, with reference to the standards and norms specific to each domain or sector of activity; The *quality of the response* to identified needs, which examines the way in which ZZF helps to introduce positive changes for the benefit of target populations. The principle of quality must therefore be placed at the heart of the implementation process of all the organization's projects. Its ultimate aim is to help guarantee and substantiate the performance and results of our projects.

**Learning:** Zamzam Foundation sees itself as a learning organization that thrives on reality in the field to develop its intervention methods and to stay as in tune as possible with the needs, expectations and choices of the populations concerned. With a key role in the constant improvement of the organization's actions, learning and knowledge management processes must form an integral part of the project's management cycle, regardless of the timescale of the project.

The ultimate aim of this policy's principle of 'learning' is to make a contribution to ZZF's interventions' process of continuous improvement, by fostering the creation and transfer of knowledge and feedback, and sharing project results and lessons learned.

**Accountability:** At Zamzam Foundation, the concept of accountability refers to the ability to answer to stakeholders (agencies, organizations, groups or individuals), which have a direct or indirect interest in the action, in a transparent manner (i.e. a clear and understandable manner). It aims to demonstrate that actions are implemented in accordance with agreed methods so as to achieve the set objectives and, where necessary, to explain and analyze any discrepancies or changes.

The accountability process can be boosted by the introduction of an appropriate and reliable information system attached to the planning, monitoring and evaluation mechanisms which will allow results to be disseminated, and will demonstrate the contribution made to the process of change. A planning, monitoring and evaluation policy also facilitates an increase in accountability to ZZF beneficiaries. The ultimate aim of this policy's principle of 'accountability' is therefore to strengthen ZZF's ability to account for its actions and to

achieve objectives by means of a transparent and responsible mechanism for gathering, analyzing and sharing information relating to events, actions and the performance of our projects.

## 2.3 Approaches to project/programme management

### 2.3.1 Key Elements

*a. Focus on people - An ethical responsibility*

Zamzam Foundation exists to improve the lives of vulnerable people by mobilizing the power of humanity. Those who are vulnerable do not choose to be affected by risks, disasters or other threats to their well-being. Communities affected by such threats may at times require assistance from external organizations to supplement their own coping mechanisms. However, there is often an uneven power balance between humanitarian agencies and the people they seek to help. This, combined with relatively little regulation in humanitarian practice, has the potential to lead to a limited amount of choice exercised by those affected by risks or disasters in regard to the assistance they receive.

Therefore, the ethical responsibility to address people's real needs effectively and with equity and dignity, through their participation, should be a key starting point in the design of humanitarian interventions. One way in which humanitarian organizations, including ZZF, can fulfill this ethical responsibility is through the adoption of a "results-based" approach to the management of their work.

*b. Results-Based Management*

"Results-Based Management" (RBM) refers to an overall approach to managing projects and programmes that focuses on defining measurable results and the methodologies and tools to achieve those results. RBM supports better performance and greater accountability by applying a clear logic: plan, manage and measure an intervention with a focus on the results you want to achieve.

"Results" are the intended or unintended effects of an intervention, and they can be positive or negative, depending on multiple factors. In RBM, intended positive results are used as the basis of planning, while an effort is made to anticipate any potential negative results so that they can best be avoided or minimized.

The intended results of an intervention are often referred to as "objectives". Results and objectives can be classified according to their level of importance, with the lower-level objectives defining the changes that need to occur in order for the higher-level objectives to be achieved. By setting out in advance the intended results of an intervention and ways in which to measure whether they are achieved or not, we can see more clearly whether a difference has genuinely been made for the people concerned.

### 2.3.2 Project/programme cycle

There is a range of models that can be used to implement a results-based approach. The model described and recommended in this manual is based on the "project/programme cycle", which depicts the management of an intervention through a sequence of interrelated phases (see figure below). These phases help define and think through the design and management of an intervention. The phases are broadly progressive, with each one leading into the next. However, the phases are also interrelated and may at times overlap.

The type, duration and importance of activities related to each phase will vary depending on the context. For example, if the initial assessment was very brief, there may be a need to obtain supplementary information during the planning phase. Similarly, information gathered during implementation and monitoring will be

relevant for a later evaluation or a possible second instance of assessment, if the intervention continues beyond one cycle. For the purposes of this manual, the different phases of the project/programme cycle are defined as follows:

**Initial assessment:** This phase is a process to understand the current situation and find out whether or not an intervention is required. This is done by identifying the key factors influencing the situation, including problems and their causes, as well as the needs, interests, capacities and constraints of the different stakeholders. When an intervention is required, an assessment can include an initial analysis and proposal of the type of intervention that could be carried out.

**Planning:** The planning phase is the process of defining an intervention's intended results (objectives), the inputs and activities needed to accomplish them, the indicators to measure their achievement, and the key assumptions that can affect the achievement of the intended results (objectives). Planning takes into consideration the needs, interests, resources, mandates and capacities of the implementing organization and various stakeholders. At the end of the planning phase, a project plan is produced and ready to implement.
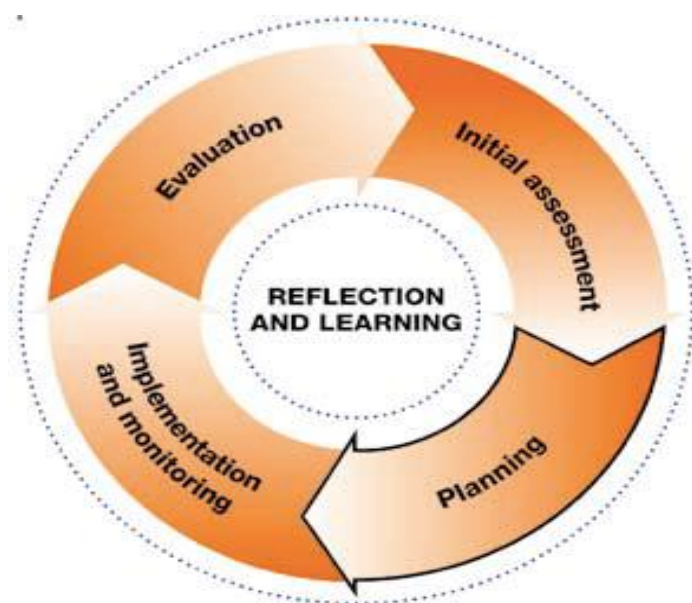


**Implementation and monitoring:** During implementation, activities are carried out to achieve the intended results (objectives). Implementation is specific to each particular area of intervention, be it water and sanitation, first aid, organizational development, emergency response or humanitarian advocacy. Detailed guidance on implementation can therefore be found in manuals dedicated to the area of intervention concerned. "Monitoring" is defined in this manual as "the routine collection and analysis of information in order to track progress, check compliance and make informed decisions for project/programme management". Monitoring systems should be established during the planning phase to allow collection of information on the progress made in achieving the objectives during implementation. The resulting progress reports inform decisions on whether or not an intervention needs to be changed or adapted as the situation evolves.

**Evaluation:** The "evaluation" phase is defined as "an assessment, as systematic and objective as possible, of an ongoing or completed project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfillment of objectives, developmental efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation

of lessons learned into the decision-making process of both recipients and donors." As with monitoring, it is critical that reliable indicators are identified during the planning phase for the purposes of evaluation at various stages of the project/programme. Evaluation in turn informs the new planning process, whether it is for the continuation of the same intervention, for the implementation of a new intervention or for ending the intervention.

### 2.3.3 Tools and techniques

For an intervention to be successful, it is important that each phase of the cycle includes the involvement of the people the intervention seeks to help. It is also important to ensure the relevant participation of all those involved in different aspects of the planning and implementation of the intervention, as well as of decision-makers in governance and management and of stakeholders in other organizations or neighboring communities.

During each phase of the project/programme cycle, various tools and techniques that encourage analysis and reflection are used to support well-informed and participatory decision-making at every stage. Part A (2.4) of this manual describes the planning phase of the project/programme cycle, outlining some of the analytical tools and techniques commonly used in developing an intervention. These include analysis of stakeholders, problems and their causes, objectives, and alternative options for intervention. The methods described can help project managers identify the factors that may affect the success of an intervention. However, it is important to remember that the usefulness of these methods will depend on how well they are adapted to each specific situation.

In this manual, certain tools are recommended, some with specific step-by-step instructions. These are provided in particular for those new to project/programme design and who require detailed guidance. In every case, the methods and steps are intended only as a guide, which can and should be adapted as necessary for different situations.

## 2.4 Project Planning

Planning consists of determining solutions to an unsatisfactory situation by identifying the results that will best address identified problems and needs, and the actions and resources required to achieve those results. It is the foundation of good performance management and accountability. Planning can also be seen as a process of choosing from the different courses of action available and of prioritizing the steps to take in order to change a particular situation for the better. Usually, time and resources (material, financial, human) are limited. These two limitations have a direct consequence on an organization's ability to improve or resolve a problematic situation. This is why planning is so crucial, especially in small organizations with limited capacity. Frequently, planning is considered a difficult exercise, complicated and inaccessible– a matter reserved for specialized technicians with specific qualifications.

### 2.4.1 Levels of planning

Although almost anything can be planned, the ways in which we make plans and implement them are not always the same. Different levels of planning have to be established according to the aims of the planning process. In Zamzam Foundation, a distinction is made between "strategic" and "operational" planning. Both are integral parts of the overall process of setting priorities and targets for the organization.

#### 2.4.1.1 Strategic planning

Strategic planning is the process of deciding where an organization wants to get to and why, then choosing from the different courses of action available to ensure the best chance of getting there. It helps an organization to define a clear way forward in response to emerging opportunities and challenges, while

maintaining coherence and long-term sustainability. It usually covers the long term (roughly a minimum of three or four years, up to ten years). It guides the overall direction of an organization by defining its vision and mission and the goals or strategic objectives necessary to achieve them.

The strategic objectives should be linked to prioritized sectors of intervention based on the capacities of the organization and other stakeholders and should include a timeframe and outline evaluation mechanisms. Strategic planning also includes choosing and designing a framework, which sets out the best courses of action to achieve the stated objectives. A "strategic plan" is the document resulting from this process. One of the key functions of the strategic plan is to guide and influence the development of more detailed planning at the operational level. Therefore, a strategic plan is a key reference for project/programme managers when designing, implementing and evaluating a Zamzam Foundation intervention.

### 2.4.1.2 Operational planning

Operational planning is the process of determining how the objectives spelt out in the strategic plan will be achieved at the field level. This is done by working through a series of steps (outlined in this Part), identifying or refining more detailed objectives at each level, linked to the objectives in the strategic plan. These objectives can then be grouped and organized into "plans", "programmes" and "projects".

Operational planning usually covers the short term (between several months and three years). In order to translate strategic objectives into practical results, the required actions need to be planned (in a work plan), along with their costs (in a budget), how the work will be funded (in a resource mobilization plan) and who will carry out the work.

The relationship between strategic and operational planning is also a cyclical process, with the experience from operational planning being used to inform strategic planning, and strategic planning then informing the general direction of operational planning. Operational plans are often made up of several "programmes", which are in turn made up of several "projects". Projects and programmes consist of several activities, which are the smallest elements for which we plan.

## 2.5 The planning phase in the project/programme cycle

The aim of the planning phase is to define an intervention's intended results (objectives), the inputs and activities needed to accomplish them, the indicators to measure their achievement, and the key assumptions that can affect the achievement of the results (objectives). Planning takes into consideration the needs, interests, resources, mandates and capacities of the implementing organization and various stakeholders. At the end of the planning phase, a project plan is produced and ready to implement. The planning phase can be divided into several stages and steps, in a number of different ways. For the purposes of this manual, the phase is organized as follows:

### Analysis stage

Situation and problem analysis – This involves identifying the main strengths, interests, needs, constraints and opportunities of the implementing team and of key stakeholders and identifying the problems that need to be solved and their causes and consequences.

a. Development of objectives – This involves developing objectives based on the identified problems and verifying the cause-effect relationships.
b. Selection of objectives – This involves identifying the different options available to achieve the main objective and determining which one the implementing team or agency is best suited to tackle.

**Design stage**
  a. Logical framework (logframe) matrix – This involves refining the intervention's objectives, identifying the assumptions, indicators and means of measuring them, and developing a summary of activities.
  b. Activity scheduling – This involves determining the sequence of activities, estimating their duration, setting milestones and assigning responsibilities.
  c. Resource planning – This involves determining the inputs needed and budget on the basis of the activity schedule.
  d. Developing a monitoring system for the intervention.

## 2.5.1 Analysis stage

### 2.5.1.1 Situation and problem analysis

The aim of the first steps in the analysis stage is to understand in more detail the information gathered during the assessment phase. It is often a transitional step between initial assessment and design, but exactly what steps are necessary will depend on how the initial assessment was carried out. The conclusions and recommendations of the assessment should be used as the basis for a more detailed analysis of the problems to be tackled. If the information collected appears to be inaccurate, incomplete or biased, it may be necessary to redo some of the assessment steps, using the relevant methodology and tools.

It is therefore useful for the people who carried out the initial assessment to participate in this stage of the planning phase. As a general rule, if the assessment team has already completed some of the steps outlined here (e.g. stakeholder analysis or problem analysis) and there is a consensus on the conclusions and recommendations between all those involved in the assessment and the planning of the intervention, these steps do not need to be repeated or supplemented.

#### 2.5.1.1.1 Tools for analysis

Situation analysis requires tools to summarize, compare, prioritize and organize data. Many different tools can be used – those provided here are examples only and are not necessarily the best tools to use in every situation. A tool is only useful if used at the right time and in the right way. The same tool can also be used at different times.

This manual proposes three tools to analyze the situation in which a team intends to intervene:
  a. Stakeholder analysis – to assess the problems, interests and potential of different groups in relation to the conclusions of the assessment
  b. SWOT analysis – a tool with a wide range of uses, including, as suggested here, to assess the capacity of the implementing agency or team
  c. Problem tree analysis – to get an idea of the main problems and their causes, focusing on cause-effect relationships

The above tools can be supplemented or replaced by other tools, as long as the minimum criteria are met.

#### 2.5.1.1.2 Stakeholder analysis

A "stakeholder" in this context is a person or group of people who have an interest in the intervention that is being planned. "Stakeholder analysis" is a technique used to identify and assess the interests of the people, groups or institutions that the intervention seeks to help and of others who may significantly influence the intervention's success. The overall aim of stakeholder analysis is to ensure that the intervention takes place in the best possible conditions, by aligning it realistically with the needs and capacities of the stakeholders.

One way to conduct this analysis is by drawing up a comparative table. First, the stakeholders must be identified. The stakeholders can be categorized as follows:

a.  Institutions that will potentially be involved in the intervention: the United Nations agencies, government ministries, local administration, and government institutions, other NGOs etc.
b.  Target groups, for example vulnerable groups or potential beneficiaries, such as "mothers with young children", "youth population under 30 years old" or, for a capacity-building project, etc.
c.  Others, for example various associations, local groups, schools, local NGOs, community leaders, the media, etc.

Second, the problems, interests, needs, potential, interaction and other relevant factors are identified and analyzed for each stakeholder. The factors to be considered for each stakeholder may vary from context to context, but some key factors would normally include:

a.  Problems: What are the key problems identified in the assessment and affecting the stakeholder in question? (e.g. poor health care/education, poor crop yield, high unemployment, etc.)
b.  Interests: What motivates the stakeholder group? (e.g. music and dance, sport, technology, recognition, etc.)
c.  Potential: How can the stakeholder group contribute to resolving the issues identified? (e.g. high level of commitment in areas of interest, voluntarism, idealism, free time, knowledge of the environment, etc.)
d.  Interaction: How can the implementing team relate to this group? Which channels of communication can be used? (e.g. youth associations, community centres, trainers, school, families, etc.)
e.  Others' actions: Is any other association, organization, group, etc. already implementing a project or action that targets the selected group? If so, identify them and their actions to avoid any overlap, as well as to establish the basis for a possible collaboration and to save effort and resources.
f.  Zamzam Foundation actions: Is there any previous or current ZZF project/programme or service targeting this group? If so, the team should discuss with those implementing the project/programme to see if it is sufficient as it is or if it needs to be reinforced, improved or replaced. Ideally, the whole exercise would be carried out in a participatory session with representatives of potential stakeholder groups, including potential beneficiaries, ZZF staff and volunteers, and government officials. The effective use of participatory planning methods and group facilitation tools can help ensure that the views and perspectives of different stakeholder groups are adequately represented and understood.

### 2.5.1.1.3 SWOT analysis

Another common tool used to analyze the situation before designing an intervention is the "SWOT analysis". This can be used to facilitate participatory group discussions to identify and compare strengths, weaknesses, opportunities and threats related to different aspects of the situation being analyzed.

This tool can be used in many different ways. The implementing team, depending on what they want to analyze, can use different definitions of each "SWOT" element. Sometimes, "strengths" and "weaknesses" are taken to be factors internal to an organization and "opportunities" and "threats" to be external factors. An alternative is to define "strengths" and "weaknesses" as current factors and "opportunities" and "threats" as future factors. A third approach is not to use a fixed definition but to leave the exercise very open.

The exercise can be used to analyse organizational capacity, capacity in the community or simply general societal factors in relation to the issues identified in the assessment. If a similar analysis has already been carried out at an earlier stage during the initial assessment, SWOT may still be useful to verify and add to this information if necessary.

If an implementing team uses the SWOT analysis to look at the capacity of the organization to act on the issues identified in the assessment, some of the key questions to be answered would be:

a. Where are we today in terms of strength and development? (e.g. people served, organizational structure, relationships with donors and partners, etc.)
b. Is our environment (political/economic situation, culture, history, traditions, etc.) favourable to project/programme implementation and the organization's own development?
c. How could we benefit from the project/programme for its long-term development (and not just from the capacity-building component of the project/programme)?
d. What are the risks related to the project/programme for the organization (i.e. side effects, hidden costs in the short and long term, burden, additional staff, logistics to sustain in the long term, public image/perception, etc.)?
e. What is the expected impact on key aspects of the organization? Is that impact positive or negative for its long-term development?

A SWOT analysis can reveal hidden obstacles to a potential project/programme, especially when participants have a wide range of interests and knowledge. It can similarly identify positive elements that may not be immediately evident.

### 2.5.1.1.4 Problem analysis (using the "problem tree" tool)

Problem analysis can be defined as the thorough study of one or more problems (identified during the assessment stage), to identify their causes and decide whether and how to tackle them. A "problem" is defined here as "an unsatisfactory situation that may be difficult to cope with". Problem analysis is a critical stage of project/programme planning, as it guides all subsequent analysis and decision-making on priorities.

Merely listing and ranking problems does not provide for a sufficiently deep analysis of the situation. The aim of problem analysis is to structure, summarize and organize the initial findings of an assessment in order to arrive at a clearer understanding of the situation under analysis. It involves identifying the negative aspects of an existing situation (i.e. "problems") and then identifying the immediate and underlying causes.

By identifying the causes of a problem, it is possible to start to identify possible solutions, which will address the problem. Some form of problem analysis may have been done during the initial assessment, in which case the information should be revisited, verified, and completed if necessary. If not, it should be started at this point, using the information discussed and analyzed during the assessment and during the stakeholder and SWOT analyses.

A variety of tools can be used to support problem analysis. One commonly used tool is the "problem tree". This visual method uses the analogy of a tree to facilitate the analysis of the problem(s). The exercise produces a summary picture of the existing negative situation, for example with the main problem as the "trunk", the causes of the problem as the "roots" and the effects of the problem as the "branches". The problem tree exercise can be carried out in three steps:

Step 1: Discuss in a group the various issues that have been identified in the assessment.
Step 2: Identify and agree on the core problem(s) to be addressed.
Step 3: Identify and analyze the causes and effects of the core problem(s).

The third step involves repeatedly asking the question "why does this problem exist?" (The exercise is

sometimes called a "why-why tree"). The analysis then looks at the connections (cause-effect relationship) between the problems identified.

The "problem tree" produced by the exercise should provide a robust but simplified version of reality. A problem tree cannot and should not contain or explain the complexities of every identifiable cause-effect relationship.

### 2.5.1.2 Development of objectives

An objective is an intended result that an intervention sets out to achieve. This is the stage at which you begin to define the results you want to achieve at different levels. The aim of the exercise is to define the desired future situation for all the identified problems, so that you can later identify those that the organization can realistically tackle. It is again critical to conduct the process in a participatory way, involving the main stakeholders, including representatives of the people whom the intervention aims to help.

A common method of developing, identifying and selecting objectives is to create an "objectives tree", based very closely on the "problem tree". As with the problem tree, the objectives tree should provide a simplified but robust summary of reality.

The objectives tree is a tool to aid analysis and the presentation of ideas. Its main strength is that it keeps the analysis of potential project objectives firmly rooted in addressing a range of clearly identified priority problems. It will help to:
   a. Demonstrate and describe the situation in the future if all the identified problems were remedied
   b. Identify possible objectives (intended results) and verify the hierarchy between them
   c. Illustrate and verify the causal (means-ends) relationships through a diagram
   d. Establish priorities by:
      1. Assessing how realistic the achievement of some objectives may be; and
      2. Identifying additional means that may be required to achieve the intended results

There are two basic steps in creating an objectives tree:
Step 1: Turn each of the problems in the problem tree into positive statements ("objectives") by reformulating the negative situations as desirable positive situations, based on the needs that arise from the problems. Reproduce the shape of the problem tree, substituting each problem with an objective.

Step 2: Check the logic (the cause-effect relationships) to ensure that the objective makes sense. Will the achievement of the lower-level objectives help achieve the higher-level objectives? Modify the objectives, if necessary by:
   a. Revising the statements to be more clear or accurate
   b. Adding new objectives that are relevant/necessary
   c. Removing objectives that are irrelevant or unnecessary

### 2.5.1.3 Selection of objectives

Once the objectives tree has been created, it provides a set of overall potential objectives for the intervention. However, you cannot solve all of the problems. If you try to address all of the objectives identified, it is likely to be a very lengthy and expensive intervention. You will therefore need to focus on one or a few specific areas in the objectives tree.

This analytical stage is in some respects the most difficult and challenging, as it involves synthesizing a

significant amount of information and then making a complex judgment about the best implementation options to pursue. In practice, a number of compromises often have to be made to balance different stakeholder interests, the demands of the population, and practical constraints such as likely resource availability.

2.5.1.3.1 Suggested method for analysis
*Step 1: Define potential solutions*
Look at the objectives tree and group objectives together to define broad potential "solutions". This can be done, by looking at which objectives are directly linked to each other in a cause-effect relationship. During the earlier analysis stage, the potential merits or difficulties of different ways of addressing the problems may well have already been discussed. These issues and options must now be looked at more closely to determine the likely scope of the intervention before more detailed design work is undertaken.

*Step 2: Select the most appropriate solution*
Based on the set of solutions identified in the objectives tree, the team will now need to weigh up the different options available and choose the most appropriate one for the implementing team. This will then determine the scope of the intervention. There are a variety of tools to assist in this process. Two tools described here are the objectives analysis table and SWOT analysis. The objectives analysis table summarizes and organizes the information on each issue in a comparative table. It is a useful tool to promote discussion and exchange among the team designing and implementing the intervention. As always, the quality of the analysis and the viability of the resulting decisions made will depend on the quality and legitimacy of the data being analyzed (costs, prices, availability, local practices, etc.). The different criteria can be measured using numbers (e.g. 1 to 3, with 3 being the most positive and 1 the least positive); the solution that scores highest should be selected.

## 2.5.2 Design stage
The design stage involves clarifying the objectives of the intervention through the definition of precise and measurable statements of the intended results to be achieved at different levels. It also entails defining how the results will actually be achieved through inputs and activities and identifying indicators by which to measure those results.

### 2.5.2.1 Defining results and objectives
"Results" are defined as "the effects of actions, and can be intended or unintended, positive or negative". The intended results that an intervention sets out to achieve are often referred to as "objectives" and are the basis of planning. Results and objectives can be split by levels of increasing significance, sometimes referred to as the "results chain" or "objectives hierarchy". The different levels of results/objectives are developed according to the information generated during the assessment phase and analysis stage and organized in a summary table or other structure. The most commonly used tool is the logical framework (logframe) matrix.

### 2.5.2.2 Logical framework matrix
The logframe matrix consists of a table with four rows and four columns, in which the key aspects of a project/programme are summarized. It sets out a logical sequence of cause-effect relationships based on the results chain/objectives hierarchy. The process of developing and selecting objectives explained earlier is used as the basis for the objectives set out in the logframe matrix. There are a variety of formats used for logframes, and it is important to have a clear and common understanding of the different terms used.

The logframe does not show every detail of a project/programme. Further details, such as the proposal,

budget and activity schedule, can be provided in other documents that accompany the logframe, but they should all be linked very clearly to the logframe. The logframe is used not only for project/programme design, but also as the basis for implementation, monitoring and evaluation. It is a living document, which should be consulted and altered throughout the intervention's life cycle.

The following section shows one way that a logframe matrix can be created in a structured way. However, it is important to note that the task can be approached in different ways. It is a process of improvement by trial and error, not just a set of linear steps.

One approach is to fill in all the objectives first, then check whether they are realistic by looking at the assumptions at each level, before adding the indicators and means of verification. This is the approach taken here. Another approach is to complete all the objectives with their indicators and means of verification together before moving on to develop the assumptions.

As new parts of the logframe are drafted, information previously assembled will often need to be reviewed and, if required, revised. However, choosing one of the broad approaches to the completion of the matrix can sometimes help to guide the team. The sequence of steps presented here is therefore only a guide, to be used if the intervention team finds it helpful.

*Logical framework: definitions of terms*

| Logical framework: definitions of terms | | | |
|---|---|---|---|
| **Objectives**<br>(What we want to achieve) | **Indicators**<br>(How to measure change) | **Means of verification**<br>(Where/how to get information) | **Assumptions**<br>(What else to be aware of) |
| **Goal**<br>The long-term results that an intervention seeks to achieve, which may be contributed to by factors outside the intervention | Impact indicators<br>Quantitative and/or qualitative criteria to measure progress against the goal | How the information on the indicator(s) will be collected (can include who will collect it and how often) | External factors beyond the control of the intervention, necessary for the goal to contribute to higher-level results |
| **Outcome(s)**<br>The primary result(s) that an intervention seeks to achieve, most commonly in terms of the knowledge, attitudes or practices of the target group | Outcome indicators<br>Quantitative and/or qualitative criteria to measure progress against the outcomes | As above | External factors beyond the control of the intervention, necessary for the outcomes to contribute to achieving the goal. |
| **Outputs**<br>The tangible products, goods and services and other immediate results that lead to the achievement of outcomes | Output indicators<br>Quantitative and/or qualitative criteria to measure progress against the outputs | As above | External factors beyond the control of the intervention, necessary if outputs are to lead to the achievement of the outcomes |
| **Activities**<br>The collection of tasks to be carried out in order to achieve the outputs | Inputs<br>The materials and resources needed to implement activities | Costs (and sources)<br>The summary costs for each of the identified resources/ activities; sources of income can also be specified | External factors beyond the control of the intervention, necessary for the activities to achieve the outputs |

### 2.5.2.3 Designing objectives

At this stage, the draft objectives selected from the objectives tree should be transferred to the logframe and further refined if necessary in order to design a complete set of objectives for the intervention. In keeping with the RBM approach, the logframe must focus on the achievement of real changes, which can be measured. All the objectives should be written as simple, clear and concise statements that describe the intended result to be achieved.

The "goal" is a simple, clear statement that describes "the long-term results that an intervention seeks to achieve, which may be contributed to by factors outside the intervention". It should reflect the ultimate aim of the intervention, i.e. the conditions to be changed. It relates to the highest level of results, those over which you have least control.

| Objectives | Indicators | Means of verification | Assumptions |
|---|---|---|---|
| Goal | | | |
| Outcome(s) | | | |
| Outputs | | | |
| Activities | | | |

For instance, the goal of a mother/child nutrition project could be: "Reduce infant mortality associated with poor nutrition in target communities". There are factors that may contribute to reducing infant mortality other than the nutrition project. Other health interventions such as immunization campaigns or the construction of health clinics can have an impact on reducing infant mortality. Livelihood projects, which increase household income, can also contribute to the reduction of infant mortality.

Often, the goal may be developed from the main objective set out in the objectives tree. The goal may also be taken from a lower-level objective in the objectives tree, especially if the main objective that was originally identified was at a very high level (e.g. "improve the overall well-being of the community".)

"Impact" is often used primarily to refer to the actual long-term results brought about by the intervention, whether positive or negative, primary or secondary, direct or indirect, intended or unintended. Impact refers to the same level of long-term results as the goal, but the goal refers to the intended positive results of the intervention only.

#### Outcomes

"Outcomes" are "the primary result(s) that an intervention seeks to achieve, most commonly in terms of the knowledge, attitudes or practices of the target group". The achievement of the outcome(s) should contribute directly to the achievement of the overall goal. Outcomes are the intended medium-term effects of an intervention's outputs. You have less control over outcomes than outputs.

The outcomes will often be developed from the next level down in the objectives tree. The goal and outcomes of an intervention are often taken directly from an organization's strategic plan or influenced by it. Even when this is the case, the process of defining objectives based on analysis is nonetheless a vital step in order to check whether there are additional outcomes specific to the situation. It also acts as a necessary validation of the relevance of the wider strategy to the particular context in which the project/programme is being developed. One or more outcomes can be adopted, depending on the context of the intervention.

*Outputs*

"Outputs" are "the tangible products, goods and services and other immediate results that lead to the achievement of outcomes". They are the most immediate effects of an activity, the results over which you have most control.

The outputs should describe all the results that need to be achieved in order to achieve the outcome(s), no more, no less. Normally, the key outputs can be developed from the objectives statements at the next level down of the objectives tree, but it is necessary to verify whether there are any missing or unnecessary outputs.

*Activities*

"Activities" are the collection of tasks to be carried out in order to achieve the outputs– the day-to-day actions that need to be carried out in order to achieve the project/ programme outputs and, by extension, the outcome(s).

Activities are not always included in the logframe. Sometimes they are included in detail, sometimes in summary, and sometimes not at all. If they are only summarized or not included at all in the logframe, they are usually set out in more detail, along with an activity schedule (work plan), in a separate document.

*Inputs/resources costs and sources*

The inputs/resources are the materials and means needed to implement the planned activities. This concept includes the required personnel (number and profile), equipment, facilities, technical assistance, funds, contracted services, etc.

2.5.2.3.1 Verifying the logic of the objectives – if-then causality

The first column of the logframe matrix summarizes the "means-end" logic of the proposed project/programme (also known as the "intervention logic"). When the objectives hierarchy is read from the bottom up, it can be expressed in terms of:

IF adequate inputs are provided, THEN activities can be undertaken.
IF the activities are undertaken, THEN outputs can be produced.
IF outputs are produced, THEN the project outcome will be achieved.
IF the project outcome is achieved, THEN this should contribute to the goal.

If reversed, we can say that:
IF we wish to contribute to the goal, THEN we must achieve the project outcome.
IF we wish to achieve the project outcome, THEN we must deliver the outputs.
IF we wish to deliver the outputs, THEN the specified activities must be implemented.
IF we wish to implement the specified activities, THEN we must be able to source the identified inputs.
This logic is tested and refined by the analysis of assumptions in the fourth column of the matrix.

2.5.2.4 Assumptions and risks

"Assumptions" in the logframe are external factors, which are important for the success of the intervention but are beyond its control. They should also be "probable" – reasonably likely to occur, not certain or unlikely.

For example, in an agriculture project in an area where droughts have occasionally occurred, as assumption would be: "There will be no drought during the project." This external factor is clearly outside the control of

the implementing team and would influence the project's success if it did not hold true and a drought did occur.

Other examples of external factors outside the control of the project include political and economic changes, war/civil disturbance, and the actions of other actors, such as public agencies, private organizations and civil society organizations. Assumptions are important to identify because they help check whether the proposed objectives are reasonable and well-informed, or based on unrealistic optimism or poor initial assessment. The identification of assumptions is a "reality check" for the potential for success of an intervention and may lead to the modification of the objectives and their indicators.

It is important to monitor assumptions during the life of the intervention, in order to make decisions about how to manage them. For example, if an unexpected drought did occur, the implementing team would have to consider how to find alternative water sources. In the case of factors even further beyond the project's control – such as the outbreak or worsening of internal conflict – the project team would have to consider scaling down or even closing the project.

There are a number of approaches to identifying, which assumptions should be monitored during the intervention, usually based on a series of key questions. The process may seem complicated at first, but as you become more familiar with designing logframes, it will become more straightforward. The following six steps are recommended to assist in the identification of assumptions.

### 2.5.2.4.1 Recommended steps for identifying an assumption

*Step 1: Identify critical external factors/risks*
This is typically done during the initial assessment phase or analysis stage of the planning phase, e.g. through the problem analysis, SWOT analysis or other such tools. This may also be done by, looking at each objective in the logframe and asking what may prevent it from being achieved.

*Step 2: Restate the external factors/risks as assumptions*
Assumptions identify potential problems or risks that can hinder or block the achievement of objectives, but they are restated as the conditions needed for the success of the project. This step also involves statements of the positive conditions needed for the intervention's success.

*Step 3: Align the assumptions with specific objectives*
Each assumption should be linked to a specific objective in the logframe – they are conditions, which need to hold true in order for the achievement of one level of result to lead to the next. For example, the assumption "Prices for building materials remain within the project budget" applies for the output "Transitional shelter kits are distributed".
An "if-and-then" test helps to identify the correct assumption at the correct level, for example:
  a. IF "Transitional shelter kits are distributed"
  b. AND "Prices for building materials remain within the project budget" hold true,
  c. THEN the outcome "Improve access to transitional shelter in target communities" will be achieved.

In some instances, a general assumption may apply to all objectives, such as: "The political situation remains stable allowing for project implementation". It is best to list such a global assumption at the goal level, with the understanding that such an assumption would also affect all the objectives below that if it did not hold true.

*Step 4: Check that the assumption is indeed important*

Excessive assumptions can complicate the logframe and monitoring. Therefore, it is important to limit assumptions to only those that would threaten the intervention's success if they did not hold true. For example, for the output "Transitional shelter kits are distributed", it is unnecessary to list as an assumption that "Public transport is functioning in the area" if shelter kits would be distributed by agency vehicles and collected by people on foot. However, assumption related to public transport may be relevant for a different output of the intervention, e.g. "Volunteers from the region are trained in shelter skills at the central office"), if the volunteers would have to use public transport to attend the training.

*Step 5: Check that the assumption is indeed outside the control of the intervention*

It is important to avoid listing as an assumption something that the intervention should address itself. For example, in the context of a health promotion project, "People are receptive to personal hygiene messages", may not be a good assumption when the intervention team can recruit appropriately trained staff or volunteers to consult the target population to design and market hygiene messages that people will be receptive to.

*Step 6: Check that the assumption is "probable"*

An assumption that should be included in the logframe and monitored is one that is "probable", i.e. an important external factor that will most likely hold true, but there is still a reasonable chance that it may not. Due to this element of uncertainty, it is important to monitor the external factor during the intervention, in order to take action to address it if necessary. External factors which are "certain" or "unlikely" require different action. An important external factor that is certain to hold true should not be listed as an assumption. It is certain the positive condition will happen, so no action needs to be taken.

An important external factor that is unlikely to hold true should not be listed as an assumption. The project/programme design should be modified to address such a risky external factor. If it is impossible to modify the intervention to address an external factor which is unlikely to hold true (i.e. a high risk), it may mean that the intervention is not viable and needs to be re- examined.

### 2.5.2.5 Indicators

An indicator is a unit of measurement that helps determine what progress is being made towards the achievement of an intended result (objective). Indicators set out what information to collect in order to answer key questions about the progress of an intervention. These questions relate to different evaluation criteria (shown in brackets after each question):

a. How much did we do? How many resources did we use to get there? (Efficiency)
b. Are we accomplishing what we set out to do? (Effectiveness)
c. How do the people we are seeking to help feel about our work? (Relevance and appropriateness)
d. Is the intervention responding to real needs? (Effectiveness, relevance and appropriateness)
e. Is the work we are doing achieving its goal? (Impact)
f. Will the benefits to the population be long lasting, even after the intervention has finished? (Sustainability)

The information collected on the indicators is then used to assess progress and guide decision-making through the implementation, monitoring and evaluation of the intervention. The information can also help lessons to be learned from an intervention in order to build on successes and avoid repeating mistakes. Indicators can be quantitative (e.g. the percentage of farmers adopting new technology, number of sanitation facilities constructed or renovated) or qualitative (e.g. the level of commitment of farmers to using new

technology, beneficiaries' perceptions of the quality of the sanitation facilities provided). It is best to use a combination of both when possible.

It is usually easier to accurately measure process and output indicators than outcome indicators, such as changes in behaviour. The higher levels of the indicator hierarchy require more analysis and synthesis of different information types and sources. This affects the data collection methods and analysis during the monitoring and evaluation phases, which in turn has implications for staffing, budgets and timeframe.

### 2.5.2.5.1 Targets, baselines and the relationship between them

It is important to note that an indicator is a unit of measurement only. It does not have a target or value set against it until information (e.g. from the assessment phase) can be analyzed to determine a realistic target. A "baseline" is an analysis that describes the situation prior to an intervention, against which progress can be assessed or comparisons made. Ideally, this is a measurement against the indicators before the intervention begins. A "target" is the measurement against the indicator that the project/ programme hopes to reach. The "actual" values are then the levels that are reached during implementation.

For example, if the baseline measurement is "20% of households have functioning income- generation activities", doubling this figure to "40% of households" could be a reasonable target, depending on the capacity of the implementing organization. If the baseline measurement were higher or lower than 20%, then the target would have to be modified accordingly.

### 2.5.2.5.2 How to define the indicators

Three useful steps can be followed in defining the indicators:

*Step 1: Clarify the objectives*

Review the precise intent of the objectives and make sure you are clear on the exact changes being sought by the intervention. Good indicators start with the formulation of good objectives that everyone agrees on.

*Step 2: Develop a list of possible indicators*

Usually, many possible indicators can be readily identified. Often, it helps to develop first a long list through brainstorming or drawing on the experiences of similar projects/programmes. It can be particularly useful to refer to international industry standard indicators for a similar project/programme. At this point, encourage creativity and the free flow of ideas.

*Step 3: Assess the possible indicators and select the best*

In refining and selecting the final indicators, you should set a high standard and be practical. Data collection is expensive, so select only those indicators that represent the most important and basic dimensions of the results sought. Checking whether indicators meet a set of "SMART" criteria is a well-known method that can be used to review suggested indicators to ensure that they will help the team accurately monitor and evaluate the progress/success of the project/programme.

### SMART Criteria

SMART is a well-known formula to verify the quality of indicators. All indicators should meet the following criteria to be accurately and reliably measured:

   a.  *Specific:* The indicator clearly and directly measures a specific result for the objective it is measuring.
   b.  *Measurable:* The indicator is unambiguously specified so that all parties agree on what it covers and there are practical ways to measure the indicator.

c. *Achievable:* The measurement of the indicator is feasible and realistic, within the resources and capacity of the project/programme, and the data are available.
d. *Relevant:* The indicator provides appropriate information that is best suited to measuring the intended result or change expressed in the objective.
e. *Time-bound:* The indicator specifies the specific timeframe at which it is to be measured.

### 2.5.2.6 Means of verification

The "means of verification" are the ways in which information will be collected on the indicators to monitor and evaluate the progress of the intervention. The means of verification should be defined at the same time as the formulation of the indicator. This is especially important as it helps to test whether or not the indicator can be realistically measured at all, and within a reasonable amount of time, money and effort. This stage can be split into two steps:

#### Step 1: Define the sources of information

Normally this would state from where the information to measure the indicator will be collected, whether through primary research (reports or other information gathered from special studies, surveys, observation, focus group discussions and different participatory tools) and/or secondary research, i.e. available documentary sources (e.g. administrative records, progress reports, project accounts, official statistics, etc.). Sometimes, only the sources of information can be identified in the initial planning stage, and Step 2 will be completed in more detail when designing the monitoring system.

#### Step 2: Identify the data collection methods

In addition, the means of verification can specify how the information will be collected. If this is not done at this stage, it can be carried out when designing the monitoring system.
Identifying the data collection methods can include:
a. Consulting secondary research sources (as listed above).
b. Specifying which primary research methods will be used (as listed above).
c. For more detail, one can also include the following information – although this would more commonly be specified in a monitoring and evaluation plan: who will participate in the data collection (e.g. contracted survey teams, the district health office, the project/programme management team, etc.)
d. When/how regularly the information will be provided (e.g. monthly, quarterly, annually, etc.)
e. How the data will be analysed.

You should consider whether the collection of information would be possible with current capacities. If the required information cannot easily be collected with existing capacities, this should be discussed carefully. Can the required information be collected through existing systems or by improvements to existing systems? If important information is not already being collected, additional time and costs should be budgeted for in the overall intervention plan.

If the means of verification imply that it is much too expensive or complicated to collect information on a particular indicator, consider whether it should be replaced by an indicator that is easier to measure, which may be an indirect (proxy) indicator. For example, it can be very difficult to measure real increases in income in a community, as it is not possible to have access to individuals' bank statements. However, changes can be more easily measured in household assets (number of new assets or improved housing) in the community through focus group interviews or even observation, which gives a good indirect measure of the levels of income in that community.

### 2.5.2.7 Implementation
Once the main aspects of the intervention have been designed following the steps outlined above, the next step is to define:
 a. How the objectives will be achieved (activities and timeframe)
 b. The resources that should/will be mobilized to achieve them (resource schedule, budget and cash flow)
 c. The monitoring (and evaluation) system – how information on the indicators will be collected, analysed and used to guide the progress of the intervention.

### 2.5.2.8 Activity schedule
An activity schedule (also called a "work plan") is a document analysing and graphically presenting project/programme activities. It helps to identify their logical sequence, expected duration and any dependencies that exist between activities, and provides a basis for allocating management responsibility.

#### 2.5.2.8.1 Aim of the activity schedule
Once all the objectives, assumptions, indicators and means of verification have been inserted in the logframe matrix, you will be able to define the activities. Sometimes, activities are included in the logframe matrix itself, either in detail or in summary form; sometimes they are not included at all. Whichever option is used, the scheduling of when activities will take place should be completed in a separate document known as the activity schedule.

The activity schedule for a project (programme component) should be designed with a separate set of activities normally for each output of the project. An activity schedule helps to consider and determine:
 a. What will happen?
 b. When, and for how long it will happen
 c. In which order activities have to be carried out (dependencies)

Other elements can also be added to help ensure that activities are completed as planned. Some key additional elements include:
 a. Who will do what
 b. What types of inputs, besides people, will be needed
 c. Budgets, available income, expenditure
 d. Specific targets of amounts per period (e.g. Number of food kits distributed, number of workshops held)

The level of achievement of targets can be more thoroughly monitored in a monitoring and evaluation plan. The activity schedule can also be used as a basis for monitoring activities. There are many computer-based and other tools available to facilitate activity scheduling. One commonly used tool is the GANTT chart, which normally includes monitoring of the execution of activities.

The level of detail required in the activity schedule will depend on the nature and scale of the project/programme and expected implementation modalities. During the planning stage, activity specification should be indicative, as it is usually inappropriate to try and go into too much detail. However, it is useful to establish in which order key activities will take place. Once funding has been secured, activity scheduling can be more specific and detailed.

The activity schedule should be viewed as a flexible document that can be altered as circumstances change.

With the activity schedule prepared, the resources required and the scheduling of costs can be specified. The activity schedule should be clearly linked to the delivery of project/programme results (as defined in the logframe matrix), as should the resource schedule and budget. The most common problem encountered in the development of an activity schedule is an underestimation of the time required. This can happen for a number of reasons:

   a. The omission of essential activities and tasks
   b. Failure to allow sufficiently for the interdependence of activities
   c. Failure to allow for resource competition (e.g. Scheduling the same person or piece of equipment to do two or more things at once)
   d. A desire to impress with the promise of rapid results

### 2.5.2.9 Budgeting and resource planning

Once the team has established the activity schedule, it is time to create a budget detailing the required resources and costs. A budget is a financial plan for a project/ programme. The basic rule is to ensure that all resources and costs needed for each identified activity are reflected in the budget.

There must be a clear and direct connection between the budget and the activities, resources needed and costs as reflected in the logframe. The budget is a key component of a good planning process because it:

   a. Helps check if the project plan is realistic: calculates estimated costs and the funding that would be required
   b. Is a prerequisite for funding applications
   c. Is a vital support for monitoring and evaluation of project/programme progress

The person with the overall direct responsibility for the implementation of the intervention (sometimes called "project/programme manager" or "budget holder") is responsible for preparing all budgets related to the project/programme. Finance staff can provide technical support where needed.

#### 2.5.2.9.1 Role of the budget

The budget plays an essential role throughout the project/programme cycle.

#### Planning phase

Budget planning enables project managers and others to form a precise idea of the project's likely costs. It ensures that they are realistic in terms of the funds needed to implement activities to achieve the intended results. When developing budgets, project managers should have detailed discussions both with staff responsible for parts of the project and with those managing wider programme or operational budgets to ensure that the budgeting is realistic.

#### Resource mobilization

A realistic plan and budget are crucial for fundraising and any negotiation with the potential donor. It sets out what the organization will use the funds for and the results that it is hoped to achieve with those funds. A clear and realistic plan and budget which creates donor confidence are therefore essential for developing a resource mobilization plan to help secure funding that will enable the intervention to be carried out as planned.

#### Implementation phase

A clear and accurate budget is the main basis for ensuring that sufficient financial resources exist to carry out activities as planned.

## Monitoring

An accurate and detailed (activity level) budget allows for ongoing monitoring of actual expenditure alongside the activity schedule, an essential means of ensuring that the intervention is going according to plan. Good monitoring enables revisions to be made to the project plan where necessary, to ensure better implementation in terms of the realization of the stated objectives.

It is also necessary to review the budget during project implementation. When differences between budgeted and actual figures are significant, the plan and budget may need to be revised, or further review and analysis of the reasons may be required.

## Financial reporting

The budget is the starting point for financial reporting to donors. Donor confidence will be increased if reporting against the budget is sound, hence the need for realistic plans and budgets. It is also important that the narrative and financial reports are prepared together and are coherent.

It is very useful to be able to track a project's expenditure by activity. This allows the project manager to see easily and clearly how the implementation of the project is progressing. There are many ways in which this can be accomplished.

### 2.5.2.10 Sustainability analysis

Interventions must be checked for sustainability before their implementation. An intervention may be said to be sustainable when it can deliver benefits to the selected target group for an extended period of time after the main assistance from donors has ended. The following factors should be taken into account when planning/designing and implementing projects and programmes:

a. Policy support measures: Do specific policies need to be established to support the project/programme?
b. Socio-cultural aspects: These have an impact on motivation and participation. Describe measures to encourage participation of all stakeholders.
c. Gender issues: Check whether the project/programme budget includes activities required for effective mainstreaming of a gender perspective in all steps.
d. Institutional and management capacity
e. Environmental issues: Will the project have any environmental impact that needs to be taken into account? What protection measures need to be put in place and budgeted for?
f. Appropriate technology: Is the technology used culturally appropriate? Will the technology included in the project/programme build on existing technology/ know-how or on the different needs of men and women?
g. Economic and financial issues: Who will cover running, maintenance and depreciation costs?
h. Risk management: Describe how the assumptions/risks identified in the logframe will be monitored and the steps that will be taken to minimize the risks, as far as it is possible to do so.
i. Exit strategies: If the project/programme requires initial external intervention or management, describe how complete control and management of the project/ programme will be progressively transferred to the appropriate stakeholders.

# 3.0 PART B: M&E CONCEPTS AND CONSIDERATIONS

Part B provides an overview of key M&E concepts and considerations to inform planning and implementing effective monitoring and evaluation.

## 3.1 Key M&E activities in the project/programme cycle

1. **Initial needs assessment.** This is done to determine whether a project/programme is needed and, if so, to inform it's planning.
2. **Logframe and indicators.** This involves the operational design of the project/programme and its objectives, indicators, means of verification and assumptions.
3. **M&E planning.** This is the practical planning for the project/programme to monitor and evaluate the log frame's objectives and indicators.
4. **Baseline study.** This is the measurement of the initial conditions (appropriate indicators) before the start of a project/programme.
5. **Midterm evaluation and/or reviews.** These are important reflection events to assess and inform ongoing project/programme implementation.
6. **Final evaluation.** This occurs after project/programme completion to assess how well the project/programme achieved its intended objectives and what difference this has made.
7. **Dissemination and use of lessons.** This informs ongoing programming. However, reporting, reflection and learning should occur throughout the whole project/programme cycle.

## 3.2 What is monitoring?

*Monitoring* is the routine collection and analysis of information to track progress against set plans and check compliance to established standards. It helps identify trends and patterns, adapt strategies and inform decisions for project/programme management.

*Results monitoring,* tracks effects and impacts. This is where monitoring merges with evaluation to determine if the project/programme is on target towards its intended results (outputs, outcomes, impact) and whether there may be any unintended impact (positive or negative). For example, a psychosocial project may monitor that its community activities achieve the outputs that contribute to community resilience and ability to recover from a disaster.

*Process (activity) monitoring* tracks the use of inputs and resources, the progress of activities and the delivery of outputs. It examines how activities are delivered – the efficiency in time and resources. It is often conducted in conjunction with compliance monitoring and feeds into the evaluation of impact. For example, a water and sanitation project may monitor that targeted households receive septic systems according to schedule.

*Compliance monitoring* ensures compliance with donor regulations and expected results grant and contract requirements, local governmental regulations and laws, and ethical standards. For example, a shelter project may monitor that shelters adhere to agreed national and international safety standards in construction.

*Context (situation) monitoring* tracks the setting in which the project/programme operates, especially as it affects identified risks and assumptions, but also any unexpected considerations that may arise. It includes the field as well as the larger political, institutional, funding, and policy context that affect the project/programme. For example, a project in a conflict-prone area may monitor potential fighting that could not only affect project success but also endanger project staff and volunteers.

*Beneficiary monitoring* tracks beneficiary perceptions of a project/programme. It includes beneficiary satisfaction or complaints with the project/programme, including their participation, treatment, access to resources and their overall experience of change. Sometimes referred to as beneficiary contact monitoring (BCM), it often includes a stakeholder complaints and feedback mechanism. It should take account of different population groups, as well as the perceptions of indirect beneficiaries (e.g. community members not directly receiving a good or service). For example, a cash-for work programme assisting community members after a natural disaster may monitor how they feel about the selection of programme participants, the payment of participants and the contribution the programme is making to the community (e.g. are these equitable?).

*Financial monitoring* accounts for costs by input and activity within predefined categories of expenditure. It is often conducted in conjunction with compliance and process monitoring. For example, a livelihoods project implementing a series of micro-enterprises may monitor the money awarded and repaid, and ensure implementation is according to the budget and time frame.

*Organizational monitoring* tracks the sustainability, institutional development and capacity building in the project/programme and with its partners. It is often done in conjunction with the monitoring processes of the larger, implementing organization. For example, ZZF head office may use organizational monitoring to track communication and collaboration in project implementation among its branches and field offices.

## 3.3 What is evaluation?

ZZF adopts the OECD/DAC definition of evaluation as "an assessment, as systematic and objective as possible, of an ongoing or completed project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfillment of objectives, developmental efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors."

Evaluations involve identifying and reflecting upon the effects of what has been done, and judging their worth. Their findings allow project/programme managers, beneficiaries, partners, donors and other project/programme stakeholders to learn from the experience and improve future interventions. There is a range of evaluation types, which can be categorized in a variety of ways. Ultimately, the audience and purpose of the evaluation determine the approach and method used in an evaluation.

## 3.4 ZZF Framework for Evaluation

Proper management of an evaluation is a critical element for its success. There are multiple resources to support evaluation management. ZZF Evaluation Framework identifies the key criteria and standards that guide how the organization plans, commissions, conducts, reports on and utilize evaluations.

The framework is to be applied to all evaluation activities to guide evaluations of ZZF. It draws upon the best practices from the international community to ensure accurate and reliable evaluations that are credible with stakeholders. The table below summarizes the criteria and standards for ZZF Framework for Evaluation.

*ZZF's framework for evaluation – criteria and standards*

| Evaluation Criteria | What it means |
| --- | --- |
| **Relevance & appropriateness** | The extent that the ZZF's work is suited to the needs and priorities of the target group and complements work from other actors. |

| | |
|---|---|
| **Efficiency** | The extent that the ZZF's work is cost-effective and timely. |
| **Effectiveness** | The extent that the ZZF's work has or is likely to achieve its intended, immediate results. |
| **Coverage** | The extent that the ZZF's work includes (or excludes) population groups and the differential impact on these groups. |
| **Impact** | The extent that the ZZF's work affects positive and negative changes on stakeholders, directly or indirectly, intended or unintended. |
| **Coherence** | The extent that the ZZF's work is consistent with relevant policies (e.g. humanitarian, security, trade, military and development), and takes adequate account of humanitarian and human rights considerations. |
| **Sustainability & connectedness** | The extent the benefits of the ZZF's work are likely to continue once the ZZF's role is completed. |
| **Other crucial standards to be observed** | |
| **Utility** | Evaluations must be useful and used. |
| **Feasibility** | Evaluations must be realistic, and managed in a sensible, cost-effective manner. |
| **Ethics and legality** | Evaluations must be conducted in an ethical and legal manner, with particular regard for the welfare of those involved in and affected by the evaluation. |
| **Impartiality & independence** | Evaluations should provide a comprehensive and unbiased assessment that takes into account the views of all stakeholders. With external evaluations, evaluators should not be involved or have a vested interest in the intervention being evaluated. |
| **Transparency** | Evaluation activities should reflect an attitude of openness and transparency. |
| **Accuracy** | Evaluations should be technically accurate, providing sufficient information about the data collection, analysis and interpretation methods so that it's worth or merit can be determined. |
| **Participation** | Stakeholders should be consulted and meaningfully involved in the evaluation process when feasible and appropriate. |
| **Collaboration** | Collaboration between key operating partners in the evaluation process improves the legitimacy and utility of the evaluation. |

## 3.5 Baseline and endline studies

A baseline study is an analysis describing the initial conditions (appropriate indicators) before the start of a project/programme, against which progress can be assessed or comparisons made. An endline study is a measure made at the completion of a project/programme (usually as part of its final evaluation), to compare with baseline conditions and assess change. We discuss baseline and endline studies together because if a baseline study is conducted, it is usually followed by another similar study later in the project/programme (e.g. an endline study) for comparison of data to determine impact.

Baseline and endline studies are not evaluations themselves, but an important part of assessing change. They usually contribute to project/programme evaluation (e.g. a final or impact evaluation), but can also contribute to monitoring changes on longer-term projects/programmes. The benchmark data from a baseline is used for comparison later in the project/programme and/or at its end (endline study) to help determine what

difference the project/programme has made towards its objectives.

## 3.6 Comparing monitoring, evaluation, reviews and audits

The main difference between monitoring and evaluation is their timing and focus of assessment. Monitoring is ongoing and tends to focus on what is happening. On the other hand, evaluations are conducted at specific points in time to assess how well it happened and what difference it made. Monitoring data is typically used by managers for ongoing project/programme implementation, tracking outputs, budgets, compliance with procedures, etc. Evaluations may also inform implementation (e.g. a midterm evaluation), but they are less frequent and examine larger changes (outcomes) that require more methodological rigour in analysis, such as the impact and relevance of an intervention.

Recognizing their differences, it is also important to remember that both monitoring and evaluation are integrally linked; monitoring typically provides data for evaluation, and elements of evaluation (assessment) occur when monitoring. For example, monitoring may tell us that 200 community facilitators were trained (what happened), but it may also include post-training tests (assessments) on how well they were trained. Evaluation may use this monitoring information to assess any difference the training made towards the overall objective or change the training was trying to produce, e.g. increase condom use, and whether this was relevant in the reduction of HIV transmission.

A review is a structured opportunity for reflection to identify key issues and concerns, and make informed decisions for effective project/programme implementation. While monitoring is ongoing, reviews are less frequent but not as involved as evaluations. Also, ZZF typically uses reviews as an internal exercise, based on monitoring data and reports. They are useful to share information and collectively involve stakeholders in decision-making. They may be conducted at different levels within the project/programme structure (e.g. at the community level and at headquarters) and at different times and frequencies. Reviews can also be conducted across projects or sectors. It is best to plan and structure regular reviews throughout the project/programme implementation.

An audit is an assessment to verify compliance with established rules, regulations, procedures or mandates. Audits can be distinguished from an evaluation in that emphasis is on assurance and compliance with requirements, rather than judgments of worth. Financial audits provide assurance on financial records and practices, whereas performance audits focus on the three E's – efficiency, economy and effectiveness of project/programme activities. Audits can be internal or external.

## 3.7 M&E standards and ethics

### 3.7.1 Overall standards

M&E involves collecting, analysing and communicating information about people – therefore, it is especially important that M&E is conducted in an ethical and legal manner, with particular regard for the welfare of those involved in and affected by it. International standards and best practices help to protect stakeholders and to ensure that M&E is accountable to and credible with them. The following is a list of key standards and practices for ethical and accountable M&E:

- **M&E should uphold the principles and standards of ZZF.** The most important are the Fundamental Principles of the organization and the Code of Conduct.
- **M&E should respect the customs, culture and dignity of human subjects**. This is consistent with the United Nations' Universal Declaration of Human Rights. This includes differences due to religion,

gender, disability, age, sexual orientation and ethnicity. Cultural sensitivity is especially important when collecting data on sensitive topics (e.g. domestic violence or contraceptive usage), from vulnerable and marginalized groups (e.g. internally displaced people or minorities), and following psychosocial trauma (e.g. natural disaster or conflict).

- **M&E practices should uphold the principle of "do no harm".** Data collectors and those disseminating M&E reports should be respectful that certain information can endanger or embarrass respondents. "Under this circumstance, evaluators should seek to maximize the benefits and reduce any unnecessary harm that might occur, provided this will not compromise the integrity of the evaluation findings". Participants in data collection have the legal and ethical responsibility to report any evidence of criminal activity or wrongdoing that may harm others (e.g. alleged sexual abuse).

- **When feasible and appropriate, M&E should be participatory.** Local involvement supports the engagement of beneficiaries and stakeholders and builds local capacities. Stakeholder consultation and involvement in M&E increases the legitimacy and utility of M&E information, as well as overall cooperation and support for and ownership of the process.

- **Participation.** An M&E system should ensure that stakeholders could provide comment and voice any complaints about the ZZF's work. This also includes a process for reviewing and responding concerns/grievances.

### 3.7.2 Attention to gender and vulnerable groups

Data collection, analysis and reporting should strive for a balanced representation of any potentially vulnerable or marginalized groups. This includes attention to differences and inequalities in society related to gender, race, age, sexual orientation, physical or intellectual ability, religion or socioeconomic status. Therefore, it is important to collect and analyse data so that it can be disaggregated by sex, age and any other social distinctions that inform programme decision-making and implementation. Particular attention should be given to a gender-balanced representation.

Gender refers to economic, social, political and cultural differences (including opportunities) with being male or female. Due to social (gender) and biological (sex) differences, women and men can have different health behaviours and risks, as well as different experiences from health services. In most societies, women have less access to and control over health resources and service for themselves and their children. Gender norms can also affect men by assigning them roles that encourage risk-taking behaviour and neglect of their and their family's health. Furthermore, gender interacts with other social differences, such as race, age and class.

### 3.7.3 Minimize bias and error

M&E helps uphold accountability, and should therefore be accountable. This means that the M&E process should be accurate, reliable and credible with stakeholders. Consequently, an important consideration when doing M&E is that of bias. Bias occurs when the accuracy and precision of a measurement is threatened by the experience, perceptions and assumptions of the researcher, or by the tools and approaches used for measurement and analysis.

Minimizing bias helps to increase accuracy and precision. Accuracy means that the data measures what it is intended to measure. For example, if you were trying to measure knowledge change following a training session, you would not just measure how many people were trained but also include some type of test of any knowledge change.

Similarly, precision means that data measurement can be repeated accurately and consistently over time and by different people. For instance, if we use a survey to measures people's attitudes for a baseline study, two years later the same survey should be administered during an endline study in the same way for precision.

As much as we would like to eliminate bias and error in our measurements and information reporting, no research is completely without bias. Nevertheless, there are precautions that can be taken, and the first is to be familiar with the major types of bias we encounter in our work:

a. Selection bias results from poor selection of the sample population to measure/ study. Also called design bias or sample error, it occurs when the people, place or time period measured is not representative of the larger population or condition being studied. It is a very important concept to understand because there is a tendency to study the most successful and/or convenient sites or populations to reach (which are often the same). For example, if data collection is done during a convenient time of the day, during the dry season or targets communities easily accessible near paved roads, it may not accurately represent the conditions being studied for the whole population. Such "selection bias" can exclude those people in greatest need – which goes against ZZF's commitment to provide aid on the basis of need alone.

b. Measurement bias results from poor data measurement – either due to a fault in the data measurement instrument or the data collector. Sometimes the direct measurement may be done incorrectly, or the attitudes of the interviewer may influence how questions are asked and responses are recorded. For instance, household occupancy in a disaster response operation may be calculated incorrectly, or survey questions may be written in a way that biases the response, e.g. "Why do you like this project?" (Rather than "What do you think of this project?").

c. Processing error results from the poor management of data – miscoded data, incorrect data entry, incorrect computer programming and inadequate checking. This source of error is particularly common with the entry of quantitative (statistical) data, for which specific practices and checks have been developed.

d. Analytical bias results from the poor analysis of collected data. Different approaches to data analysis generate varying results e.g. the statistical methods employed, or how the data is separated and interpreted. A good practice to help reduce analytical bias is to carefully identify the rationale for the data analysis methods.

## 3.8 Key steps for project/programme M&E

Part 2 builds upon the key M&E concepts presented in Part 1, outlining six key steps for project/programme M&E. Taken together, these steps are to guide planning for and implementing an M&E system for the systematic, timely and effective collection, analysis and use of project/programme information.

a. Identify the purpose and scope of the M&E system
b. Plan for M&E human resources and capacity building
c. Prepare the M&E budget
d. Plan for data collection and management
e. Plan for data analysis
f. Plan for information reporting and utilization

### 3.8.1 Step 1 – Identify the purpose and scope of the M&E system

#### 3.8.1.1 Review the project/programme's operational design (logframe)

For ZZF's projects/programmes, the logframe is the foundation on which the M&E system is built. The logframe is a summary of the project/programme's operational design, based on the situation and problem

analysis conducted during the project/ programme's design stage. It summarizes the logical sequence of objectives to achieve the project/programme's intended results (activities, outputs, outcomes and goal), the indicators and means of verification to measure these objectives, and any key assumptions. For ZZF's projects, the project/programme design is typically summarized in a standard logframe table.

A well-developed logframe reflects the informational needs of the project/programme. For example, the objectives and informational needs of a project/programme during an emergency operation will have very different logframe and related M&E requirements than a longer-term development project/programme.

When reviewing the logframe, it is important to check it for logic and relevance. Often, in the rush to start a project/programme, there may be oversights in the development of a logframe. Sometimes it is prepared in an office or by people far removed from the project/programme setting. The logframe is not a static "blueprint", but should be reassessed and revised according to the realities and changing circumstances in the field. This is particularly true in humanitarian responses, where populations and needs can rapidly change in a short time frame. However, changes should only be made after careful consideration and consultation with key stakeholders and in compliance with any donor requirements.

An important consideration in the logframe is the use of industry-recognized, standard indicators. These can make a big difference in the subsequent M&E. Standard indicators may not only save time in designing indicators but an important advantage is that they typically come with accepted, standard definitions to ensure they are measured reliably and consistently, and measurement methods are usually well developed and tested. Another key advantage is that standard indicators can be compared over time, place and projects/programmes. Finally, industry-recognized indicators contribute to credibility and legitimacy across stakeholders.

However, there are limitations to how much indicators can be standardized, and they can be inflexible and unrepresentative of the local context. Also, consideration should be given to the project/programme's capacity (financial or human) to measure certain standard indicators according to international methods and best practices. Nevertheless, industry-recognized, standard indicators can be very useful, and often it is best to use a combination of standardized indicators and those designed specifically for the local context.

### 3.8.1.2 Identify key stakeholder informational needs and expectations
Planning an M&E system based on stakeholder needs and expectations helps to ensure understanding, ownership and use of M&E information. It is essential to have a clear understanding of the priorities and information needs of people interested in or affected by the project/programme. This includes stakeholder motivations, experience and commitment, as well as the political and other constraints under which various stakeholders operate. It is especially important that local knowledge is sought when planning M&E functions to ensure that they are relevant to and feasible in the local context, and that M&E information is credible, accepted and more likely to be supported. Typically, the ZZF's projects/programmes involve multiple stakeholders at different levels.

Typically, a stakeholder assessment is conducted during the planning stage of a project/programme. This initial assessment can inform M&E planning, but for planning the M&E system, it is recommended to focus more specifically on the informational needs and expectations of the key stakeholders.

### 3.8.1.3 Identify any M&E requirements
Important informational needs worth specific attention are those that arise from any donor guidelines and

requirements, governmental laws and regulations, and internationally agreed upon standards. These requirements can include very detailed procedures, formats and resources, and are often non-negotiable. Therefore, it is best to identify and plan for them early in the M&E planning process.

Internationally agreed upon standards and criteria are particularly relevant to the ZZF's work. ZZF interventions are often implemented through various partnerships with bilateral donors and INGOs, or national and civil society organizations. It is important that we conduct our work according to agreed-upon standards and criteria – which need to be monitored and evaluated.

### 3.8.2 Step 2 – Plan for M&E human resources and capacity building

An effective M&E system requires capable people to support it. While the M&E plan identifies responsibilities for the data collection on each indicator, it is also important to plan for the people responsible for M&E processes, including data management, analysis, reporting and M&E training. This section summarizes key considerations in planning for the human resources and capacity building for a project/programme's M&E system.

#### 3.8.2.1 Assess the projects/programme's human resources capacity for M&E

A first step in planning for M&E human resources is to determine the available M&E experience within the project/programme team, partner organizations, target communities and any other potential participants in the M&E system. It is important to identify any gaps between the project/programme's M&E needs and available personnel, which will inform the need for capacity building or outside expertise.

Key questions to guide this process include:

a. Is there any existing M&E expertise among the project/programme team? How does this match with the M&E needs of the project/programme?

b. Is there M&E support from the organization implementing the project/programme? For instance, is there a technical unit or individuals assigned with M&E responsibilities to advise and support staff, and if so, what is their availability for the specific project/programme?

c. Do the target communities (or certain members) and other project/programme partners have any experience in M&E? It can be useful to refer to the discussions about the M&E stakeholder assessment and the M&E activity planning to guide this process. When available, any larger organizational assessment that has included M&E should be referred to for projects/programmes belonging to the organization.

#### 3.8.2.2 Determine the extent of local participation

Ideally, data collection and analysis is undertaken with the very people to whom these processes and decisions most relate. This is an important principle for ZZF, which prioritizes the involvement of local communities. Often, local participation in M&E is expected or required, and building local capacity to sustain the project/programme is identified as a key objective of the project/programme itself.

Participation can happen at multiple levels in the M&E system. Ultimately, the degree of participation will vary according to the project/programme and context. Some examples of M&E participation include:

a. The use of participatory assessments, e.g. vulnerability capacity assessments (VCAs) or community SWOT (strength-weakness opportunity-threats) analysis

b. Involvement of local representatives in the project/programme design (logframe) and identification of indicators

c. Participatory monitoring where elected community representatives reporting on key monitoring indicators

d. Self-evaluations using simple methods adapted to the local context, e.g. most significant change and participatory project reviews.

e. Sharing monitoring and evaluation findings with community members for participatory analysis and identification or recommendations

f. Utilization of feedback mechanisms for beneficiaries and staff.

### 3.8.2.3 Define the roles and responsibilities for M&E

It is important to have well-defined roles and responsibilities at each level of the M&E system. The M&E plan identifies people responsible for the specific collection of data on each indicator, but there are other responsibilities throughout the M&E system, from data management and analysis to reporting and feedback. This will ultimately depend on the scope of the project/programme and what systems are already in place within the project/programme and/or the implementing organization.

Typically, there is a wide range of people with some kind of monitoring responsibilities within their job descriptions – including project/programme staff, volunteers, community members and other partners. When identifying roles and responsibilities for M&E it is worth considering using the M&E stakeholder assessment table, or an organizational diagram for the project/programme. Specific consideration should be given to the M&E qualifications and expectations, including the approximate percentage of time each person is expected to allocate to M&E. This will help with practical work planning, as well as in the preparation of project/programme job descriptions and terms of reference (ToR).

One key planning consideration is who will have overall management responsibility for the M&E system. It is important to clearly identify who will be the primary resource person that others, internal and external to the project/ programme, will turn to for M&E guidance and accountability. This person (or their team) should oversee the coordination and supervision of M&E functions, and "backstop" (screen) any problems that arise. They need to have a clear understanding of the overall M&E system, and will likely be the person(s) leading the M&E planning process.

### 3.8.2.4 Plan to manage project/programme team's M&E activities

Whether project/programme staff, volunteers, community members, or other partners involved in the M&E system, it is important to develop tools and mechanisms to manage their time and performance. The M&E plan helps define these roles and the time frames. It is also important to include this planning as part of the overall performance monitoring system for staff/volunteers. Other tools, such as time sheets, are usually available from an organization's human resources (HR) department/unit. Finally, as with beneficiaries themselves, it is critical to uphold sound, ethical HR practices in the management of staff and volunteers.

### 3.8.2.5 Identify M&E capacity-building requirements and opportunities

Once roles and responsibilities have been determined, it is important to specify any M&E training requirements. For longer-term projects/programmes, or those with significant training needs, it may be useful to create an M&E training schedule (planning table), identifying key training sessions, their schedule, location, participants and allocated budget. M&E training can be formal or informal. Informal training includes on-the-job guidance and feedback, such as mentorship in completing checklists, commenting on a report or guidance on how to use data management tools. Formal training can include courses and workshops on project/programme design (logframes), M&E planning, data collection, management, analysis and reporting, etc. Formal training should be tailored towards the project/programme's specific needs and audience. This can involve an outside trainer coming to the project/programme team/site, sending participants to training/ workshops, online training or academic courses.

### 3.8.3 Step 3 – Prepare the M&E budget

It is best to begin systematically planning the M&E budget early in the project/programme design process so that adequate funds are allocated and available for M&E activities. The following section summarizes key considerations for planning the project/programme's M&E budget.

#### 3.8.3.1 Itemize M&E budget needs

If the M&E planning has been approached systematically, identifying key steps and people involved, detailing budget items should be straightforward. Start by listing M&E tasks and associated costs. If a planning table for key M&E activities has been prepared, this can be used to guide the process. If there is a required format for itemizing budget items – e.g. within the implementing organization or from the donor – adhere to the format or an agreed-upon variation. Otherwise, prepare a spreadsheet clearly itemizing M&E expenses. It is particularly important to budget for any "big-ticket items", such as baseline surveys and evaluations. Examples of budget items include:

a. Human resources. Budget for staffing, including full-time staff, external consultants, capacity building/training and other related expenses, e.g. translation, data entry for baseline surveys, etc.

b. Capital expenses. Budget for facility costs, office equipment and supplies, any travel and accommodation, computer hardware and software, printing, publishing and distributing M&E documents, etc.

In addition to itemizing expenses in a spreadsheet, a narrative (description) justifying each line item can help guard against unexpected budget cuts. It may be necessary to clarify or justify M&E expenses, such as wage rates not normally paid to comparable positions, fees for consultants and external experts, or the various steps in a survey that add up in cost (e.g. development and testing of a questionnaire, translation and back-translation, training in data collection, data collectors' and field supervisors' daily rates, travel/accommodation costs for administering the survey, data analysis and write-up, etc).

#### 3.8.3.2 Incorporate M&E costs into the project/programme budget

Costs associated with regular project/programme monitoring and undertaking evaluations should be included in the project/programme budget, rather than as part of the organization's overhead (organizational development or administrative costs). Therefore, the true cost of a project/programme will be reflected in the budget. Otherwise, including M&E costs as an administrative or organizational development cost may incorrectly suggest inefficiencies in the project/programme and the implementing organization, with donors reluctant to cover such costs when in reality they are project-related costs. Ideally, financial systems should allow for activity-based costing where monitoring costs are linked to project/ programme activities being monitored.

If the budget has already been completed with the project/programme proposal, determine whether there is a separate/appropriated budget for M&E purposes. Ongoing monitoring expenses may already be built into staff time and expenditure budgets for the overall project/programme operation, such as support for an information management system, field transportation and vehicle maintenance, translation, and printing and publishing of M&E documents/ tools. Certain M&E events, such as a baseline study or external evaluation, may not have been included in the overall project/programme budget because the budget was planned during the proposal preparation period, before the M&E system had been developed. In such instances it is critical to ensure that these M&E costs are added to the project/programme budget.

#### 3.8.3.3 Review any donor budget requirements and contributions

Identify any specific budgeting requirements or guidance from the funding agency or implementing

organization. If multiple funding sources are utilized, ensure that the budget is broken down by donor source. Determine if there are any additional costs the donor(s) will or will not cover, such as required evaluations, baseline studies, etc. Check with the finance unit or officer to ensure the budget is prepared in the appropriate format.

### 3.8.3.4 Plan for cost contingency

Contingency costs refer to unexpected costs that may arise during project/programme implementation – in this case the M&E system. It is important to plan for unexpected contingencies such as inflation, currency devaluation, equipment theft or the need for additional data collection/analysis to verify findings. Although budget planning seeks to avoid these risks, unexpected expenses do arise.

### 3.8.4 Step 4 – Plan for data collection and management

Once you have defined the project/programme's informational needs, the next step is to plan for the reliable collection and management of the data so it can be efficiently analysed and used as information. Both data collection and management are firmly linked as data management begins the moment it is collected.

### 3.8.4.1 Develop an M&E plan table

An M&E plan is a table that builds upon a project/programme's logframe to detail key M&E requirements for each indicator and assumption. It summarizes key indicator (measurement) information in a single table: a detailed definition of the data, its sources, the methods and timing of its collection, the people responsible and the intended audience and use of the data.

The M&E plan can be formatted differently, according to the planning requirements for project/programme management. For instance, additional columns can be added, such as a budget column, a separate column to focus on data sources, or two columns to distinguish people responsible for data collection versus data analysis. Often the project/programme donor will require a specific M&E plan format.

The M&E plan should be completed during the planning stage of a project/programme (before implementation). This allows the project/programme team to cross-check the logframe and ensure that the indicators and scope of work they represent in both project/programme implementation and data collection, analysis and reporting are realistic to field realities and team capacities.

It is recommended that those who will be using it develop the M&E plan. Completing the table requires detailed knowledge of the project/programme and context provided by the local project/programme team and partners. Their involvement also contributes to data quality because it reinforces their understanding of what data they are to collect and how it will be collected.

### 3.8.4.2 Assess the availability of secondary data

An important consideration for data sources is the availability of reliable secondary data. Secondary data refers to data that is not directly collected by and for the project/programme, but which can nevertheless meet project/programme informational needs. (In contrast, primary data is collected directly by the project/ programme team.)

Examples of secondary data include:
- A vulnerability capacity assessment (VCA) conducted by a partner programme working in the project/programme area
- Demographic statistics from the government census bureau, central statistics bureau, Ministry of Health, etc.

- Maps and aerial photographs of degraded land from the line ministries
- Information on health, food security and nutritional level from UNICEF and the United Nations' Food and Agriculture Organization and the World Food Programme
- School attendance and performance records available from the Ministry of Education.

Secondary data is important to consider because it can save considerable time and expense. It can also be used to help triangulate data sources and verify (prove) primary data and analysis collected directly as part of the project/ programme.

However, it is critical to ensure that secondary data is relevant and reliable. As secondary data is not designed specifically for project/programme needs, it is important to avoid the trap of using irrelevant secondary data just because it is available. Check the relevance of secondary data for:
- Population – does it cover the population about which you need data?
- Time period – does it cover the same time period during which you need data?
- Data variables – are the characteristics measured relevant for what you are researching?
- Reputation – how credible and respected are the people (organization) that commissioned the data and the authors who conducted the research and reported the data? Identify why the secondary data was initially collected and whether there may have been any motive or reason (e.g. political or economic) that it could bias the data.
- Rigours – were the methods used to collect, analyse and report on the data technically accurate? Check that there is a description of the research methods that provides sufficient information about the data collection, management and quality control, analysis, and interpretation so that its worth or merit can be determined

### 3.8.4.3 Determine the balance of quantitative and qualitative data
When planning for data collection, it is important to plan for the extent quantitative and qualitative data will be used.

*Comparing quantitative versus qualitative data*
Quantitative data measures and explains what is being studied with numbers (e.g. counts, ratios, percentages, proportions, average scores, etc). Quantitative methods tend to use structured approaches (e.g. coded responses to surveys), which provide precise data that can be statistically analysed and replicated (copied) for comparison.

Qualitative data explains what is being studied with words (documented observations, representative case descriptions, perceptions, opinions of value, etc.). Qualitative methods use semi-structured techniques (e.g. observations and interviews) to provide in-depth understanding of attitudes, beliefs, motives and behaviors. They tend to be more participatory and reflective in practice.

Quantitative data is often considered more objective and less biased than qualitative data – especially with donors and policy-makers. Because qualitative data is not an exact measurement of what is being studied, generalizations or comparisons are limited, as is the credibility of observations and judgments. However, quantitative methods can be very costly, and may exclude explanations and human voices about why something has occurred and how people feel about it. Recent debates have concluded that both quantitative and qualitative methods have subjective (biased) and objective (unbiased) characteristics.

Therefore, a mixed-methods approach is often recommended that can utilize the advantages of both, measuring what happened with quantitative data and examining how and why it happened with qualitative data. When used together, qualitative methods can uncover issues during the early stages of a project/programme that can then be further explored using quantitative methods, or quantitative methods can highlight particular issues to be examined in-depth with qualitative methods. For example, interviews (a qualitative method) may reveal that people in a community are concerned about hunger, and a sample of infants' weights (a quantitative method) may substantiate that mass wasting and malnutrition are indeed prevalent in the community.

### 3.8.4.4 Triangulate data collection sources and methods

Triangulation involves the process of using different sources and/or methods for data collection. Combining different sources and methods (mixed methods) helps to crosscheck data and reduce bias to better ensure the data is valid, reliable and complete. The process also lends to credibility if any of the resulting information is questioned. Triangulation can include a combination of primary and secondary sources, quantitative and qualitative methods, or participatory and non-participatory techniques, as follows:

- Example of triangulating data sources: When determining community perception of a cash-for-work project, do not just include participants selected for the project, but also some who did not take part as they may have a different perspective (e.g. on the selection process for participating in the project). Also, include the views of the project staff, partners and other local groups working in the project/programme area.
- Example of triangulating data collection methods: A household survey is conducted to determine beneficiary perception of a cash-for-work project, and it is complemented by focus group discussion and key informant interviews with cash-for-work participants as well as other community members.

### 3.8.4.5 Determine sampling requirements

A sample is a subset of a whole population selected to study and draw conclusions about the population as a whole. Sampling (the process of selecting a sample) is a critical aspect of planning the collection of primary data. Most projects/ programmes do not have sufficient resources to measure a whole population (a census), nor is it usually necessary. Sampling is used to save time and money by collecting data from a subgroup to make generalizations about the larger population.

The process of sampling includes the following steps:
a. Define the specific issues that you will be measuring – this will inform what methodology will be used to address the selected issues. For example, in determining a survey on sanitation knowledge, attitude and practice/behaviour could be used to assess the extent to which behaviour has been changed by activities that raise awareness of sanitation.
b. Determine the appropriate sampling method – unless primary data collection includes the total population studied, one of two broad types of samples will be used, depending on the degree of accuracy and precision required:
   1. Random (probability) samples are quantitatively determined and use statistics to make more precise generalizations about the larger population.
   2. Purposeful (non-random) samples are qualitatively determined, often based on convenience or some other factor; they typically involve smaller, targeted samples of the population, but because they do not use statistics they are less reliable for generalizations about the larger population.
   Random samples are more complex, laborious and costly than purposeful samples, and are not

necessary for qualitative methods such as focus group discussions. However, random samples are often expected in larger projects/ programmes because they are more precise and can minimize bias – donors frequently require random sampling when using baseline and endline surveys. As discussed above, a mixed-methods approach may be best, combining both sample methods for quantitative and qualitative data collection.

In addition to these two broad types of sampling methods, there is a variety of specific sampling designs, such as simple random sampling, stratified random sampling, cluster sampling, multi-stage sampling, convenience sampling, purposeful sampling, and respondent-driven sampling. While we are unable to go into detail about the different sampling designs now, it is important to understand that the design choice impacts the overall sample size. In summary, certain sample designs are selected over others because they provide a sample size and composition that is best suited for what is being studied.

c. Define the sample frame – a list of every member of the population from which a sample is to be taken (e.g. the communities or categories of people – women, children, refugees, etc).

d. Determine the sample size – the sample size is calculated using equations specific to the type of survey (whether descriptive/one-off or comparative/baseline- endline surveys – both discussed below) and to the indicator type used as a basis for the calculation (whether a mean/integer or proportion/percentage).

There are several key design variables for each of these equations that need to be determined, each of which affects sample size. While there are no "right" values for these design variables, there are accepted standards and "rules of thumb". For example, for descriptive/one-off surveys, the key design variables include significance (also known as confidence level) and the margin of sampling error. The accepted standard varies between 90 and 95 per cent for the confidence level and between 5 and 10 per cent for the margin of sampling error. While calculating sample sizes is a scientific exercise (understanding which equations to use and what values to assign the key design variables), shaping the sample size to "fit" a given project/programme contains a fair amount of art, as manipulating the values of the key design variables involves tradeoffs that affect both survey implementation and analysis. It is strongly recommended that an experienced sampling technician is consulted.

### 3.8.4.6 Prepare for surveys
Surveys are a common method of gathering data for project/programme M&E. Surveys can be classified in a number of ways, such as according to the specific method used – e.g. in person, by mail, telephone, etc. They generally use interview techniques (questions or statements that people respond to), measurement techniques (e.g. infant's weight to determine nutritional status), or a combination of both. Unless a complete population is to be surveyed, some form of sampling (discussed above) is used with surveys.

One important distinction for surveys can be made by the manner in which the survey questions are asked:

a. Semi-structured surveys use open-ended questions that are not limited to defined answers but allow respondents to answer and express opinions at length – e.g. "How useful is the first-aid kit to your family?" Semi-structured surveys allow more flexibility in response, but take more skill and cost in administering – interviewers must be experienced in probing and extracting information.

b. Structured surveys use a standardized approach to asking fixed (closed-ended) questions that limit respondents' answers to a predefined set of answers, such as yes/no, true/false, or multiple choices – e.g. "Did you receive the first aid kit?" While pre-coded questions can be efficient in time and useful for statistical analysis, they must be carefully designed to ensure that questions are understood by all respondents and are not misleading. Designing a questionnaire may seem commonsense, but it involves a subtlety that requires experience.

Another important distinction for surveys can be made based on the timing and function of the survey:

a. A descriptive survey seeks to obtain representative data about a population at a single point of time, without making comparisons between groups (such as a one-off needs assessment).

b. A comparative survey seeks to compare the results between groups – either the same population at two points in time (e.g. baseline-endline design), or two distinct groups at the same point in time (e.g. treatment control groups).

Whatever survey method is used, it is critical to understand how it affects the way in which sample sizes are calculated. For example, descriptive surveys need to account for a margin of error when calculating the sample size, while comparative surveys require a power calculation to determine the best sample size.

### 3.8.4.7 Prepare specific data collection methods/tools

The M&E plan summarizes data collection methods and tools, but these still need to be prepared and ready for use. Sometimes methods/tools will need to be newly developed but, more often, they can be adapted from elsewhere. Some additional practical considerations in planning for data collection include:

a. Prepare data collection guidelines. This helps to ensure standardization, consistency and reliability over time and among different people in the data collection process. Double-check that all the data required for indicators is being captured through at least one data source.

b. Pre-test data collection tools. This helps to detect problematic questions or techniques, verify collection time, identify potential ethical issues and build the competence of data collectors.

c. Translate and back-translate data collection tools. This ensures that the tools are linguistically accurate, culturally compatible and operate smoothly.

d. Train data collectors. This includes an overview of the data collection system, data collection techniques, tools, ethics, culturally appropriate interpersonal communication skills and practical experience in collecting data.

e. Address ethical concerns. Identify and respond to any concerns expressed by the target population. Ensure that the necessary permission or authorization has been obtained from local authorities, that local customs and attire are respected, and that confidentiality and voluntary participation are maintained.

### 3.8.4.8 Establish project/programme staff/volunteers review mechanisms

While monitoring and assessing the project/programme context and implementation is critical, project/programme staff performance information is an important source of data for ongoing project/programme monitoring and management. Staff time management and performance reviews are typically part of the human resources department of the implementing organization. As such, it is important to ensure that any project/programme-specific monitoring systems are organizationally consistent and in accordance with human resources processes and procedures. Therefore, we limit the following discussion to a few key considerations:

a. Individual staff and volunteers' objectives should be based on the relevant objectives from the project/programme's logframe, reflecting a clear link between the objectives of an individual and those of the project/programme.

b. Utilize regular tools and forums to track and review time management and performance. Such tools should be used in combination with periodic performance reviews, which can be on a one-to-one basis with the project/programme manager or involve input from multiple sources, including subordinates, peers, supervisors and community members (clients) themselves.

c. A useful tool for monitoring and managing individual staff time is a time sheet of their key activities and/or deliverables. Against this, each individual can then record how much time they actually spent on each activity. As such, this tool helps with planning an individual's time as well as subsequent monitoring, and, when actual time is very different to that planned, plans should be revised accordingly.

d. A useful tool for monitoring and managing human resources is a project/programme team time sheet of key activities and/or deliverables. This provides an overview of the full team, highlighting which people should be engaged in which activities, when, and how much of their time is required.

### 3.8.4.9 Plan for data management

Data management refers to the processes and systems for how a project/programme will systematically and reliably store, manage and access M&E data. It is a critical part of the M&E system, linking data collection with its analysis and use. Poorly managed data wastes time, money and resources; lost or incorrectly recorded data affects not only the quality and reliability of the data but also all the time and resources invested in its analysis and use.

Data management should be timely and secure, and in a format that is practical and user-friendly. It should be designed according to the project/programme needs, size and complexity. Typically, project/programme data management is part of an organization's or project/programme's larger data management system and should adhere to any established policies and requirements.

The following are seven key considerations for planning a project/programme's data management system:

a. Data format. The format in which data is recorded, stored and eventually reported is an important aspect of overall data management. Standardized formats and templates (as provided in this guide) improve the organization and storage of data. Generated data comes in many forms, but are primarily:
- Numerical (e.g. spreadsheets, database sets)
- Descriptive (narrative reports, checklists, forms)
- Visual (e.g. pictures, video, graphs, maps, diagrams)
- Audio (recordings of interviews, etc).

Data formats can be physical, such as written forms stored in an office filing cabinet, or electronic, such as a spreadsheet stored in a computer database (discussed below). Sometimes, donors or key partners, such as government ministries, may define how the data should be recorded and stored. Whatever format, it is important that it is user-friendly, whether its user is a community member, field staff member or project manager.

b. Data organization. A project/programme needs to organize its information into logical, easily understood categories to increase its access and use. Data organization can depend on a variety of factors and should be tailored to the users' needs. Data is typically organized by one or a combination of the following classification logic:
- Chronologically (e.g. month, quarter, year)
- By location
- By content or focus area (e.g. different objectives of a project/ programme)
- By format (e.g. project reports, donor reports, technical documents).

c. Data availability. Data should be available to its intended users and secure from unauthorized use. Key considerations for data availability include:
- Access. How permission is granted and controlled to access data (e.g. shared computer drives, folders, intranets). This includes the classification of data for security purposes (e.g.

confidential, public, internal, departmental).
- Searches. How data can be searched and found (e.g. according to keywords).
- Archival. How data is stored and retrieved for future use.
- Dissemination. How data is shared with others.

d. Data security and legalities. Projects/programmes need to identify any security considerations for confidential data, as well as any legal requirements with governments, donors and other partners. Data should be protected from non-authorized users. This can range from a lock on a filing cabinet to computer virus and firewall software programs. Data storage and retrieval should also conform to any privacy clauses and regulations for auditing purposes.

e. Information technology (IT). The use of computer technology to systematize the recording, storage and use of data is especially useful for projects/programmes with considerable volumes of data, or as part of a larger programme for which data needs to be collected and analysed from multiple smaller projects/ programmes. Some examples of IT for data management in M&E include:
- Handheld personal digital assistants (PDAs) to record survey findings
- Excel spreadsheets for storing, organizing and analysing data
- Microsoft Access to create user-friendly databases to enter and analyse data
- Sharepoint, a web-based intranet to store, share and discuss M&E data
- An integrated planning management system with an internet platform for inputting, organizing, analysing and sharing information.

IT can help to reorganize and combine data from various sources, highlighting patterns and trends for analysis and to guide decision-making. It is also very effective for data and information sharing with multiple stakeholders in different locations. However, the use of IT should be balanced with the associated costs for the computers and software, resources to maintain and safeguard the system, and the capacity among intended users.

f. Data quality control. It is important to identify procedures for checking and cleaning data, and how to treat missing data. In data management, unreliable data can result from poor typing of data, duplication of data entries, inconsistent data, and accidental deletion and loss of data. These problems are particularly common with quantitative data collection for statistical analysis. Another important aspect of data quality is version control. This is how documents can be tracked for changes over time. Naming a document as "final" does not help if it gets revised afterwards. Versions (e.g. 1.0, 1, 2.0, 2.1, etc.) can help, but it is also recommended to use dates as well.

g. Responsibility and accountability of data management. It is important to identify the individuals or team responsible for developing and/or maintaining the data management system, assisting team members in its use and enforcing any policies and regulations. Also, for confidential data, it is important to identify who authorizes the release/access of this data.

### 3.8.4.10 Use an indicator tracking table (ITT)
An ITT is an important data management tool for recording and monitoring indicator performance to inform project/programme implementation and management. It differs from an M&E plan because while the M&E plan prepares the project/programme for data collection on the indicators, the ITT is where the ongoing measurement of the indicators is recorded.

The ITT has three primary sections:
a. Project/programme background information, such as name, location, dates, etc.
b. Overall project/programme indicators are indicators that may not specifically be in the project/programme's logframe but are important to report for strategic management.

    c.   Logframe indicators are aligned with their respective objectives from the logframe, and are the greater part of the ITT.

An important function of the ITT is that it helps to determine variance, a key measure of indicator performance. Variance is the difference between identified targets and actual results – the percentage of target reached. For instance, in the example above, ten communities were targeted to conduct a VCA during the first reporting quarter. However, the actual communities conducting a VCA were only five.

Therefore, the percentage of target, variance, was 50 per cent. Paying attention to variance encourages critical analysis of and reporting on project/ programme performance. It also entails setting targets, a good practice in programme management. Knowing whether your indicator exceeds or underperforms its target helps to determine if your project/programme is progressing according to plans, or whether there may need to be adjustments to the implementation or time frame. Generally, a good rule of thumb is that variance greater than 10 per cent should be explained in project/programme reports.

### 3.8.4.11 Use a risk log (table)
While the ITT tracks planned indicator performance, it is also important to track any risks that threaten project/programme implementation. Such risks can include those identified and expressed as assumptions in the project/programme logframe, as well as any unexpected risks that may arise. Risks can also be tracked in a regular project/ programme management report. When monitoring a risk, in addition to the risk itself, it is important to identify the date it was first reported, rate its potential impact and likelihood (e.g. high, medium or low), explain the recommended action to be taken and by whom, and note when the risk is "closed" (no longer a risk).

### 3.8.5 Step 5 – Plan for data analysis
Data analysis is the process of converting collected (raw) data into usable information. This is a critical step of the M&E planning process because it shapes the information that is reported and its potential use. It is really a continuous process throughout the project/programme cycle to make sense of gathered data to inform ongoing and future programming. Such analysis can occur when data is initially collected, and certainly when data is explained in data reporting (discussed in the next step).

Data analysis involves looking for trends, clusters or other relationships between different types of data, assessing performance against plans and targets, forming conclusions, anticipating problems and identifying solutions and best practices for decision-making and organizational learning. Reliable and timely analysis is essential for data credibility and utilization.

### 3.8.5.1 Develop a data analysis plan
There should be a clear plan for data analysis. It should account for the time frame, methods, relevant tools/templates, people responsible for, and purpose of the data analysis. A data analysis plan may take the form of a separate, detailed written document, or it can be included as part of the overall project/ programme management and M&E system – for instance, it can be captured in the M&E plan. In whatever way it is stated, the following summarizes key considerations when planning for data analysis.

### A. Purpose of data analysis
The project/programme objectives and indicators largely determine what and how data is analysed and ultimately the audience and their information needs. Therefore, data analysis should be appropriate to the objectives that are being analysed, as set out in the project/programme logframe and M&E plan. For example:

a. Analysis of output indicators is typically used for project/programme monitoring to determine whether activities are occurring according to schedule and budget. Therefore, analysis should occur on a regular basis (e.g. weekly, monthly and quarterly) to identify any variances or deviations from targets. This will allow project/programme managers to look for alternative solutions, address any delays or challenges, reallocate resources, etc.

b. Analysis of outcome indicators is typically used to determine intermediate and long-term impacts or changes – e.g. in people's knowledge, attitudes and practices (behaviours). Outcome indicators are usually measured and analysed less frequently. When analysing this data, it is important to bear in mind that it is typically used for a wider audience, including project/programme managers, senior managers, donors, partners and people reached.

### B. Frequency of data analysis

Data analysis has to be given sufficient time. The time frame for data analysis and reporting should be realistic for its intended use. Accurate information is of little value if it is too late or infrequent to inform project/programme management; a compromise between speed, frequency and accuracy may be necessary. An important reminder is to avoid allocating excessive time for data collection (which can lead to data overload), while leaving insufficient time for analysis.

The frequency of data analysis will largely depend on the frequency of data collection and the informational needs of users – typically reflected by the reporting schedule. A schedule for data analysis can coincide with key reporting events, or be done separately according to project/programme needs. Whenever data analysis is scheduled, it is important to remember that it is not an isolated event at the end of data collection, but is ongoing from project/ programme start and during ongoing monitoring and then evaluation events.

### C. Responsibility for data analysis

Roles and responsibilities for data analysis will depend on the type and timing of analysis. Those who collect the data, e.g. field monitoring officers or other project/programme staff, can undertake analysis of monitoring data. Ideally there would also be an opportunity to discuss and analyse data in a wider forum, including other project/programme staff and management, partner organizations, beneficiaries and other stakeholders.

### D. Process for data analysis

Data analysis can employ a variety of forums tailored to the project/programme needs and context, including meetings, e-mail correspondence, dialogue through Internet platforms (e.g. Sharepoint) and conference calls. It is best to try to involve as many stakeholders as practical in such forums, which may require multiple sessions. However it occurs, it is important that data analysis is structured and planned for and not conducted as an afterthought or simply to meet a reporting deadline.

Another important consideration is the need for any specialized equipment (e.g. computers) or software (e.g. Excel, SPSS, Access, Visio etc.) for data analysis. Also, if the project/programme team is to be involved in any data entry or analysis that requires specific technical skills, determine whether such experience exists among the staff or if training is necessary. These factors can then be itemized for the M&E budget and human resource development.

### 3.8.5.2 Follow the key data analysis stages

There is no one recipe for data analysis, but five key stages can be identified:
a. Data preparation;
b. Data analysis;

c. Data presentation;
d. Data verification; and
e. Recommendations and action planning.

The remainder of this section discusses these five stages. One common consideration throughout all stages of data analysis is to identify any limitations, biases and threats to the accuracy of the data and its analysis. Data distortion can occur due to limitations or errors in design, sampling, field interviews and data recording and analysis. Therefore, it is best to monitor the research process carefully and seek expert advice when needed.

### a. Data preparation

Data preparation, often called data "reduction" or "organization", involves getting the data into a more usable form for analysis. Data should be prepared according to its intended use, usually informed by the logframe indicators. Typically, this involves cleaning, editing, coding and organizing "raw" quantitative and qualitative data, as well as crosschecking the data for accuracy and consistency.

As quantitative data is numerical, it will need to be prepared for statistical analysis. It is also at this stage that quantitative data is checked, "cleaned" and corrected for analysis. A number of tools and guidelines are available to assist with data processing, and are best planned for with technical expertise. The United Nations' World Food Programme has identified six useful steps for preparing quantitative data for analysis:

- o Nominating a person and setting a procedure to ensure the quality of data entry
- o Entering numerical variables in spreadsheet or database
- o Entering continuous variable data on spreadsheets
- o Coding and labeling variables
- o Dealing with missing values
- o Data cleaning methods.

For qualitative data (descriptive text, questionnaire responses, pictures, maps, videos, etc.), it is important to first identify and summarize key points. This may involve circling important text, summarizing long descriptions into main ideas (writing summaries in the paper's margin), or highlighting critical statements, pictures or other visuals. Key points can then be coded and organized into categories and subcategories that represent observed trends for further analysis.

A final point worth noting is that data organization can actually begin during the data collection phase. The format by which data is recorded and reported can play an important role in organizing data and reinforcing critical analysis. For example, an indicator-tracking table (ITT) can be designed to report not only the actual indicator performance but also its planned target and the percentage of target achieved. This reinforces critical reflection on variance (the difference between identified targets and actual results). For narrative reporting formats, sections can be structured highlighting priority areas that encourage critical analysis – such as best practices, challenges and constraints, lessons, future action, etc.

### b. Data analysis (findings and conclusions)

Data analysis can be descriptive or interpretive. Descriptive analysis involves describing key findings – conditions, states and circumstances uncovered from the data – while interpretive analysis helps to provide meaning, explanation or causal relationship from the findings. Descriptive analysis focuses on what happened, while interpretive analysis seeks to explain why it occurred – what might be the cause(s). Both are interrelated and useful in information reporting as descriptive analysis informs interpretive analysis.

It is also important when analysing data to relate analysis to the project/programme's objectives and respective indicators. At the same time, analysis should be flexible and examine other trends, whether intended or not. Some common types of analysis include the following comparisons:

I. Planned versus actual (temporal) comparison: As discussed above, variance is the difference between identified targets and actual results, such as data organized to compare the number of people (households) targeted in a disaster preparedness programme, versus how many were actually reached. When doing such analysis it is important to explain why any variance occurred.

II. Demographic comparison, such as data separated by gender, age or ethnicity to compare the delivery of services to specific vulnerable groups, e.g. in a poverty-lessening/livelihoods project.

III. Geographical comparison, such as data described by neighbourhood, or urban versus rural, e.g. to compare food delivery during an emergency operation. This is particularly important if certain areas have been more affected than others.

IV. Thematic comparison, such as data described by donor-driven versus owner-driven housing interventions to compare approaches for a shelter reconstruction programme.

In data description, it is often helpful to use summary tables/matrices, graphs, diagrams and other visual aids to help organize and describe key trends/findings – this can also be used later for data presentation. While this will require different types of analysis for quantitative versus qualitative data, it is important to take into consideration both quantitative and qualitative data together. Relating and comparing both data types helps to best summarize findings and interpret what is being studied, rather than using separate sets of data.

As quantitative data is numerical, its description and analysis involves statistical techniques. Therefore, it is useful to briefly discuss the use of statistics in data analysis. Simple statistical analysis (such as percentages) can be done using a calculator, while more complex statistical analysis, such as survey data, can be carried out using Excel or statistical software such as SPSS (Statistical Package for Social Sciences), STATA etc. A basic distinction to understand in statistics is the difference between descriptive and inferential statistics:

1. Descriptive statistics: Descriptive statistics are used to summarize a single set of numerical results or scores (e.g. test result patterns) or a sample group; this method helps to set the context. As the name implies, these statistics are descriptive and include total numbers, frequency, averages, proportions and distribution. Two other descriptive concepts important to understand are prevalence and incidence. Prevalence shows how many people have a specific condition (e.g. percentage prevalence of HIV/AIDS) or demonstrate certain behaviour at a specific point in time. Incidence can show how many new cases of people with this illness occur in a given period of time (e.g. rate of occurrence of a disease in a population).

2. Inferential statistics: Inferential statistics are more complicated, but allow for generalizations (inferences) to be made about the larger population from a sample. Two main categories of inferential statics are:

   a. Examining differences between groups (e.g. differences in outcome indicators between groups that participated in the same project/programme activities and control groups outside the project/programme area);

   b. Examining relationships between variables, such as cause and effect relationships (e.g. differences in the number of people with changes in sanitation practices after receiving sanitation messaging).

   c. Data validation

It is important at this point to determine if and how subsequent analysis will occur. This may be necessary to verify findings, especially with high profile or controversial findings and conclusions. This may involve

identifying additional primary and/or secondary sources to further triangulate analysis, or comparisons can be made with other related research studies. For instance, there may need to be some additional interviews or focus group discussions to further clarify (validate) a particular finding. Subsequent research can also be used in follow-up to identified research topics emerging from analysis for project/programme extension, additional funding or to inform the larger development community.

### d. Data presentation

Data presentation seeks to effectively present data so that it highlights key findings and conclusions. A useful question to answer when presenting data is, "so what?" What does all this data mean or tell us – why is it important? Try to narrow down your answer to the key conclusions that explain the story the data presents and why it is significant. Some other key reminders in data presentation include:

- Make sure that the analysis or finding you are trying to highlight is sufficiently demonstrated.
- Ensure that data presentation is as clear and simple as accuracy allows for users to easily understand.
- Keep your audience in mind, so that data presentation can be tailored to the appropriate level/format (e.g. summary form, verbal or written).
- Avoid using excessively technical jargon or detail.

There are numerous examples/formats of how data can be presented. Some examples include written descriptions (narratives), matrices/tables, graphs (e.g. illustrating trends), calendars (e.g. representing seasonal performance), pie and bar charts (e.g. illustrating distribution or ranking, such as from a proportional piling exercise); mapping (e.g. wealth, hazard, mobility, social, resource, risk, network, influence and relationships); asset wheels (a variation of pie charts representing allocation of assets); Venn diagrams (usually made up of circular areas intersecting where they have elements in common); timelines/histories; and causal flow diagrams. Whatever format is used, be sure that what you are trying to show is highlighted clearly.

### e. Recommendations and action planning

Recommendations and action planning are where data is put to use as evidence or justification for proposed actions. It is closely interrelated with the utilization of reported information, but it is presented here because the process of identifying recommendations usually coincides with analysing findings and conclusions.

It is important that there is a clear causality or rationale for the proposed actions, linking evidence to recommendations. It is also important to ensure that recommendations are specific, which will help in data reporting and utilization. Therefore, it is useful to express recommendations as specific action points that uphold the SMART criteria (specific, measurable, achievable, relevant and time-bound) and are targeted to the specific stakeholders who will take them forward. It is also useful to appoint one stakeholder who will follow up with all others to ensure that actions have been taken.

### 3.8.6 Step 6 – Plan for information reporting and utilization

Having defined the project/programme's informational needs and how data will be collected, managed and analysed, the next step is to plan how the data will be reported as information and put to good use. Reporting is the most visible part of the M&E system, where collected and analysed data is presented as information for key stakeholders to use. Reporting is a critical part of M&E because no matter how well data may be collected and analysed, if it is not well presented it cannot be well used – which can be a considerable waste of valuable time, resources and personnel. Sadly, there are numerous examples where valuable data has proved valueless because it has been poorly reported on.

### 3.8.6.1 Anticipate and plan for reporting

Reporting can be costly in both time and resources and should not become an end in itself, but serve a well-planned purpose. Therefore, it is critical to anticipate and carefully plan for reporting.

### 3.8.4.1.1 Criteria of good reporting

1. *Relevant and useful.* Reporting should serve a specific purpose/use. Avoid excessive, unnecessary reporting – information overload is costly and can burden information flow and the potential of using other more relevant information.
2. *Timely.* Reporting should be timely for its intended use. Information is of little value if it is too late or infrequent for its intended purpose.
3. *Complete.* Reporting should provide a sufficient amount of information for its intended use. It is especially important that reporting content includes any specific reporting requirements.
4. *Reliable.* Reporting should provide an accurate representation of the facts.
5. *Simple and user-friendly.* Reporting should be appropriate for its intended audience. The language and reporting format used should be clear, concise and easy to understand.
6. *Consistent.* Reporting should adopt units and formats that allow comparison over time, enabling progress to be tracked against indicators, targets and other agreed-upon milestones.
7. *Cost-effective.* Reporting should warrant the time and resources devoted to it, balanced against its relevance and use.

### A. Identify the specific reporting needs/audience

Reports should be prepared for a specific purpose/audience. This informs the appropriate content, format and timing for the report. For example, do users need information for ongoing project/programme implementation, strategic planning, compliance with donor requirements, evaluation of impact and/or organizational learning for future project/programmes?

As already noted, it is best to identify reporting and other informational needs early in the M&E planning process, especially any reporting requirements. A particularly important consideration in planning for reporting is the distinction between internal and external reporting. Internal reporting is conducted to enable actual project/programme implementation; it plays a more crucial role in lesson learning to facilitate decision-making – and, ultimately, what can be extracted and reported externally. External reporting is conducted to inform stakeholders outside the project/programme team and implementing organization; this is important for accountability.

Day-to-day operations depend upon a regular and reliable flow of information. Therefore, special attention should be given to the informational needs of the project/programme managers. They will need timely information to analyse project/programme progress and critical issues, make planning decisions and prepare progress reports for multiple audiences, e.g. superiors and donors. In turn, project-level reports provide essential information for programme managers and country directors to compare planned actions with actual performance and budget.

*Internal versus external reporting*

| Internal reporting | External reporting |
| --- | --- |
| • Primary audience is the project/ programme team and the organization in which it operates. | • Primary audience is stakeholders outside of the immediate team/ organization (e.g. donors, beneficiaries, partner organizations, international bodies, and governments). |
| • Primary purpose is to inform ongoing project management and decision-making (monitoring | |

| | |
|---|---|
| reporting). <br> • Frequency is on a regular basis according to project monitoring needs. <br> • Content is comprehensive in content, providing information that can be extracted for various external-reporting needs. <br> • Format is typically determined by the project team according to what will best serve the project/programme needs and its organizational culture. | • Primary purpose is typically for accountability, credibility, to solicit funds, celebrate accomplishments and highlight any challenges and how they are being addressed. <br> • Frequency is less often in the form of periodic assessments (evaluations). <br> • Content is concise, typically abstracted from internal reports and focused on communication points (requirements) specific to the targeted audience. <br> • Format is often determined by external requirements or preferences of intended audience. |

## B. Determine the reporting frequency

It is critical to identify realistic reporting deadlines. They should be feasible in relation to the time, resources and capacity necessary to produce and distribute reports including data collection, analysis and feedback.

Some key points to keep in mind in planning the reporting frequency:
   a. Reporting frequency should be based upon the informational needs of the intended audience, timed so that it can inform key project/programme planning, decision-making and accountability events.
   b. Reporting frequency will also be influenced by the complexity and cost of data collection. For instance, it is much easier and affordable to report on a process indicator for the number of workshop participants than an outcome indicator that measures behavioral change in a random sample, household survey (which entails more time and resources).
   c. Data may be collected regularly, but not everything needs to be reported to everyone all the time. For example:
      • A security officer might want monitoring situational reports on a daily basis in a conflict setting
      • A field officer may need weekly reports on process indicators around activities to monitor project/programme implementation
      • A project/programme manager may want monthly reports on outputs/services delivered to check if they are on track
      • Project/programme management may want quarterly reports on outcome indicators of longer-term change
      • An evaluation team may want baseline and endline reports on impact indicators during the project start and end.

## C. Determine specific reporting formats

Once the reporting audience (who), purpose (why) and timing (when) have been identified, it is then important to determine the key reporting formats that are most appropriate for the intended user(s). This can vary from written documents to video presentations posted on the Internet. Sometimes the reporting format must adhere to strict requirements, while at other times there can be more flexibility.

ZZF has defined reporting templates for many technical areas, as well as for many donor reports and communications, with related links to the donor reporting web pages. It is important that report formats and content are appropriate for their intended users. How information is presented during the reporting stage can play a key role in how well it is understood and put to use. For example, reports with graphs and charts

may work well with project/programme management, participatory discussion meetings with field staff, community (visual) mapping for beneficiaries and a glossy report or web site for donors. Reporting should be translated in the appropriate language and in a culturally appropriate format (e.g. summary form, verbal or written).

## D. The project/programme management report

Particular attention should be given the project/programme management report because it typically forms the basis for internal information that will, in turn, provide information for external reporting. Other reporting formats may occur more frequently, e.g. for specific activities, or less frequently, such as evaluation reports, but the project/ programme management report is usually the primary reporting mechanism for compiling information from various reports for project/programme management and providing information for other reports for accountability.

Project/programme management reports should be undertaken at a frequency regular enough to monitor project/programme progress and identify any challenges or delays with sufficient time to adequately respond. Most organizations undertake management reporting on a monthly or quarterly basis; there are pros and cons to both. Monthly reporting allows for a more regular overview of activities which can be useful, particularly in a fast-changing context, such as during an emergency operation. However, more frequent data collection and analysis can be challenging if monitoring resources are limited. Quarterly reports allow for more time between reports, with less focus on activities and more on change in the form of outputs and even outcomes.

### E. Identify people responsible for reporting products

It is important to specifically identify the people who will be responsible for each type of report. This can be the same person identified in the M&E plan who collects indicator data, or it may be another person who specifically prepares the data to communicate to others, e.g. the person(s) who prepares a monthly project report, donor progress report or press releases. It also includes people who present and share M&E data at forums such as community meetings, conference calls with headquarters, partnership presentations, etc. It does not need to include everyone involved in the reporting process, but the key person with overall responsibility for each reporting product/type.

It is worth remembering that whoever is reporting, it is important that they do so according to requirements, and that reported information is timely and reliable. This may seem obvious but there are often complex difficulties or "roadblocks" that need to be addressed to achieve timely and reliable reporting.

### 3.8.6.2 Plan for information utilization

The overall purpose of the M&E system is to provide useful information. Therefore, information utilization should not be an afterthought, but a central planning consideration. For this reason, identifying stakeholder informational needs has been a recurring topic throughout all M&E planning steps.

There are many factors that determine the use of information. First are the actual selection, collection and transformation of data into usable information, which has been the topic of this guide so far. Ideally, this process produces information that is relevant, timely, complete, consistent, reliable and user-friendly. The remainder of this section will briefly look at key considerations for information distribution, decision-making and planning.

### A. Information dissemination

Information dissemination refers to how information (reports) is distributed to users. This can be seen as

part of reporting, but we use dissemination here to mean the distribution of the information (reports) rather than the actual preparation of the information into a report. There are varieties of media to share information, and as with the reporting formats themselves, how reporting information is disseminated will largely depend on the user and purpose of information.

Key mediums of information dissemination
- o Print materials distributed through mail or in person.
- o Internet communication, e.g. e-mail (and attachments), web sites, blogs, etc
- o Radio communication includes direct person-to-person radio (ham radio), as well as broadcasting radio.
- o Telephone communication includes voice calls, text messaging, as well as other functions enabled on a mobile phone.
- o Television and filmed presentations.
- o Live presentations, such as project/programme team meetings and public meetings.

Selection of the reporting medium should be guided by what is most efficient in time and resources, and suitable for the audience – a process that should ideally be completed with a reporting schedule. For instance:
a. An internet-based reporting system may be best for communication between a project/programme management team and its headquarters.
b. Community meetings may be appropriate to report on data to beneficiaries who lack access to computers or are illiterate.
c. Mobile phone texting may be most timely and efficient for volunteers to report on safety conditions from the field.

It is also important to remember that information dissemination should be multidirectional. This means that in addition to distributing information upwards to management, senior management and donors, information flows should also be directed to field staff, partners and the beneficiaries themselves.

Another important consideration when distributing information is the security of internal or confidential information.

### B. Decision-making and planning

Decision-making and planning really form the heart of data utilization. But no matter how well the information is prepared or disseminated, it will ultimately be up to the user to decide when and how to put it to use. This is where M&E planning merges with project/programme management, and the manner in which decisions are made and information is used will vary according to project/programme, context and organizational culture. However, while information use is largely in the area of project/programme and organizational management, there are two key considerations that can aid the use of information in decision-making and planning:

1. Stakeholder dialogue. Stakeholder discussion and feedback on information is critical for building understanding and ownership, and informing the appropriate response. This process can begin during the analysis, review and revision of reporting information, and can correspond with information dissemination outlets, such as meetings, seminars and workshops, web-based forums, teleconferences and/or organizational reporting and follow-up procedures.

   For instance, the findings of an evaluation report are more likely to be understood and used if they are not limited to a printed report, but presented to key stakeholders in a face-to-face forum that allows them to reflect and give feedback. Ideally, this can be done before the final draft of the report to confirm key lessons and inform realistic recommendations.

2. Management response. Specific procedures for documenting and responding to information findings

and recommendations (often called "management response") should be built into the project/programme management system. At the project/programme level, this can be a management action plan with clear responses to key issues identified in a management or evaluation report.

This should specifically explain what actions would be taken, including their time frame and responsibilities; it should also explain why any recommendation or identified issue might not be addressed. Follow-up should be systematic and monitored and reported on in a reliable, timely and public manner. There are a variety of tools to support action planning and follow-up.

3. A decision log can be used to keep a record of key project/programme decisions. This can allow staff to check that decisions are acted upon, and are recorded for institutional memory. This can be referred to if any disagreement arises over why a decision was made and who was responsible for following it up, something, which can also be useful for audit purposes. Similarly, project managers can use an action log to ensure that follow-up action is taken.